

## **SECTION II**

### **ORDERING SUPPLIES And SPECIMEN COLLECTION**

## ORDERING SUPPLIES

The Bureau of Laboratories will provide request forms, kits and media and mailing containers for the collection and shipping of laboratory specimens. These supplies are provided free of charge. Please use them judiciously and only to send laboratory specimens to the Department of Health and Environmental Control. **Supplies may be obtained by indicating the quantity required on DHEC form 1323, "A Request for Laboratory Supplies". GYN Cytology forms and supplies are ordered on DHEC form 1324 and are available only to DHEC clinics.** Call 896-0913 to request these ordering forms or to request supplies.

### Collection kits

These kits contain collection materials, request form, an inside screw capped containment container with label, and a cardboard mailing container with a color coded mailing label attached. These are currently accepted by State and private couriers, and the US postal service. Each kit is to be used for only one specimen,

Mycobacteriology (collection kit for TB)\* Yellow Label

Enteric kit (for Bact. Culture)\*\* Pink Label

Parasitology kit(O & P) Blue Label

Influenza kit (during flu season) White

B pertussis PCR kit

\* also used for mycology

\*\*Note that the enteric transport medium has changed from buffered glycerol saline to Cary-Blair.

**Transport medium** (Order request forms and shipping container separately.)

GC Culture medium

2 SP Media( for Chlamydia Culture)

Viral Transport Media,

Regan-Lowe media (for Pertussis)

Mycoplasma hominis/Ureaplasma Order directly from the Virology Section, (803) 896-0819.

### Supplies

GC/Chlamydia (for Antigen Detection) Specify M or F

PPT Tubes for Viral Load

Biohazard Bags

Absorbent Packs

Envelopes (for Newborn Screening and He-HIV blood spots)

Micro tubes for Blood lead---Indicate in blank space on order form

Culturette swabs---Indicate in blank space on order form

### Chain of Custody Supplies

Integrity Seals

Permanent Marking Pens

Evidence Tape

Urine Containers

Toxicology Labels

Temperature strips

Tamper Proof Biohazard Bags

**GYN Cytology forms and supplies (for DHEC clinics only) Use DHEC form 1324 to order**

Collection Materials

1362 GYN Cytology Request form

Cardboard slide mailer (holds 2 slides)

## ORDERING SUPPLIES, CONT.

**Shipping Container** (for shipping Diagnostic specimens by courier or US postal system)

Mailing containers, screw cap: No. 10 (2 ½" x 6") No. 20 (3" x 6") No. 30 (4" x 6")

Mailing boxes: 4" x 4" 6" x 6" 8" x 8"

Rabies Container

**Shipping Container** (for shipping Infectious substances)

Hospitals and other clients using a commercial carrier must use special approved mailing containers

These have been distributed, and must be returned for re-use.

### Request Forms

The request forms provided by the Bureau of Laboratories are listed below. Forms marked with a + will be pre-addressed with your name, address and sender number. Since an over-supply cannot be returned to stock, please use discretion in the number you request. **DO NOT LOAN OR BORROW** preprinted forms to another client. The preprinted sender number determines where result reports are mailed. Forms are periodically revised. Please discontinue use of old forms once a revision has been made.

**A separate DHEC form 1323 must be submitted for each location with a unique sender number.**

Form #	Form Name (revision date)	Form color
1323	Request for Lab Supplies (8/00)	Card stock/buff
1324	Request for GYN Cytology Form and Supplies	Card stock/pink
1301	+Immunology (2/94)	White
1306	+Mycobacteriology (1/00)	Gold (Included in kit)
1308	+Rabies (02/98)	Lt. Maroon
1310	+Forensic Urine Drug Testing (chain-of custody)	Aqua
1311	+Lead Analysis (9/99)	Green
1325B*	+Gonococcal Culture (4/02)	Orange
1327	Newborn Screening (check expiration data on form)	White with green lettering
1333	+Mycology (5/96)	Lavender
1334	+Parasitology (9/90)	Aqua (Included in kit)
1336	+Prenatal (9/98)	Brown
1337	+Virus Isolation/Herpes/Chlamydia	Pink
1339	+Hemoglobin Electrophoresis (3/95)	Lt. Green
1340**	+Drugs of Abuse Testing (8/96)	Purple
1341	+Clinical Chemistry (4/00)	Brown
1345	+Bacteriology (5/96)	Orange
1357	+Hematology/Urinalysis (8/93)	Brown
1359	+ HIV Hepatitis /Syphilis Serology/ (4/97)	Gray
1362	+GYN Cytology 3445(8/99)	Red (Included in kit)
1387	+Lymphocyte Subset Panel (9/94)	Coral
3445	+GC/ Chlamydia Screening	Yellow
1812(Temporary)	Newborn Screening Blood Sample Storage Option	White
+Preaddressed		

\* Form 1325B has been revised for GC culture only. Use form 1337 for Chlamydia culture

\*\*Form 1340 is being discontinued. Use form 1310, for both COC and non-COC urine drug testing

### DHEC District laboratories forms:

These are forms used by district labs for testing done on site and are available from Central Supply in the Sims/Aycock Building, (803) 898-3498).

1360	*General Laboratory Request/Report Form	White
1361	*Laboratory Request/Report Form (STD)	White

## INSTRUCTIONS FOR COMPLETING THE TEST REQUEST FORM

**Please note the highlighted areas on the forms you receive. These are the data elements that will appear on your result report.** Information entered in other areas on the request form will not be returned to you on the result report. PLEASE TYPE OR PRINT ALL ENTRIES AND PROVIDE ALL INFORMATION REQUESTED.

1. Date Received and Laboratory Specimen Block (upper right corner)  
**for our Laboratory's use only.**
2. Patient Name: Enter last name, first name and middle initial, skipping a space between each name.
3. Patient Birth date: Enter month, day, year. Example: Sept. 1, 1983 is written 09-01-83.
4. Race: Insert appropriate initial as outlined below: (DO NOT USE NUMBERS)  
    W -- White                      I -- Indian  
    B -- Black                     N -- Non-white  
    H -- Hispanic                 O -- Oriental  
    A -- Asian                    U -- Unclassifiable
5. Sex: Mark "X" in the appropriate box.
6. Patient I.D. No.: Enter patient's social security number
7. DHEC ID: (Used by DHEC clinics.) Enter patient's DHEC ID number
8. Other I.D./Physicians: To further identify or route the report. Numbers or letters may be used. Example: Patient medical record number
9. Diagnostic Code: Enter ICD-9 code (only required for Cytology)
10. County of Residence: Write the code number for the county in which the patient lives  
(see Table 1)
11. Sender's Name and Mailing Address: If not pre-addressed, enter a complete postal mailing address.
12. Sender Number: This number is used in the computer system to determine where the results will be sent. Most forms will be pre-addressed with the sender name, address and number. See Table 2 for Sender numbers.
13. Billing Number: This number is necessary only if the test is to be billed to someone other than the sender. It is assigned by the Bureau of Laboratories. Call 896-0810 to obtain a number.
14. Program Number: This space is to be completed only on specimens being submitted by County Health Departments. See Table 3 for the appropriate code numbers.
15. Medicaid Number: If test can be billed to Medicaid, complete this space.
16. Specimen Information: Mark appropriate boxes. Enter date collected. (This sometimes appears in another location on the form.)
17. Other Information: This section is for other information pertinent to the test(s) requested. Please complete as indicated.
18. Test Request: Mark test requested. This item determines the test(s) that will be performed.
19. Sender Copy: Tear off back copy of the request form and file for future reference as necessary.

**TABLE 1**  
**COUNTY CODES**

Abbeville	01	Aiken	02
Allendale	03	Greenwood	24
Hampton	25	Horry	26
Anderson	04	Jasper	27
Bamberg	05	Kershaw	28
Barnwell	06	Lancaster	29
Beaufort	07	Laurens	30
Berkeley	08	Lee	31
Calhoun	09	Lexington	32
Charleston	10	Marion	33
Cherokee	11	McCormick	35
Chesterfield	13	Newberry	36
Clarendon	14	Oconee	37
Colleton	15	Orangeburg	38
Darlington	16	Pickens	39
Dillon	17	Richland	40
Dorchester	18	Saluda	41
Edgefield	19	Spartanburg	42
Fairfield	20	Sumter	43
Florence	21	Union	44
Georgetown	22	Williamsburg	45
Greenville	23	York	46

**TABLE 2**  
**SENDER NUMBERS**

<b>Private Physician</b>	Use your S.C. Medical License number preceded by the letter M.
<b>Group Practice</b>	A number preceded by the letter G will be assigned to group practices at their request. Use of the group number will insure that a single bill will be sent for tests submitted by all physicians in the practice. If you desire to be billed in this manner, please contact (803) 896-0810 for assignment of a group number. If each physician wishes to be billed separately, use the appropriate Medical License number.
<b>Hospital</b>	Use the hospital license number preceded by the letter H. If the test result is to be mailed directly to the patient's physician, use the physician's name, address and sender number in the appropriate spaces on the form and write the <b>hospital license number preceded by H in the billing number space</b> .
<b>Private Laboratory</b>	A number assigned by the Bureau of Laboratories. If not known, contact the Bureau at (803) 896-0810 for assignment.
<b>DHEC County Health Depts.</b>	The assigned county code number preceded by a C.

## **BILLING NUMBERS**

A billing number is only necessary if the test is to be billed to someone other than the sender. It is assigned by the Bureau of Laboratories. Call (803) 896-0810 to obtain a number.

**TABLE 3**  
**PROGRAM NUMBERS**

Used only when billing to a DHEC Program

0001	Maternal and Child Health
0002	Children Rehabilitative Services
0003	Children Health
0004	Family Planning
0005	Sickle Cell Program
0007	Cancer Control
0008	Heart Disease Control
0009	Tuberculosis Control
0010	Chronic Disease Detection
0011	STD Control
0012	Home Health Services
0017	Migrant Health
0025	District/Health Dept. Program
0027	Metabolic Screening Program
0035	STD Enhanced Project
0043	Environmental Sanitation
0050	Early and Periodic Screen, Diagnosis and Treatment
0053	Edisto HIV/AIDS Consortia
0054	Medicaid Eligible
0063	Employee Health Services
0070	Communicable Disease Control
0072	HIV-AIDS Alcohol & Drug Abuse Referrals
0089	Health Hazard Evaluation
0095	WIC
0099	Indigent (Not Eligible For Medicaid)
0101	High Risk Maternity
0110	STD-Chlamydia Study
0111	AIDS Bureau of Preventive Health Services
0202	Immunization Program
0203	Hepatitis B - Infants & Children Contacts
0204	ICSC Syphilis Project

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## **SPECIMEN COLLECTION PROCEDURES**

### **VENIPUNCTURE PROCEDURE**

**Precaution:**

**Wear Gloves while collecting and preparing blood for shipment.**

**Collection Procedure:**

1. Explain the procedure to the patient.
2. Position the patient for taking blood.
3. Apply tourniquet to the arm just above the elbow and instruct patient to make a fist.
4. Select the best vein and cleanse the skin over the site with 70% alcohol; allow to dry.
5. Use sterile needle screwed on unsterile adaptor. Vacuum collection tube may be inserted into the adaptor without danger of breaking the vacuum.
6. Insert the needle into the vein and collect required tubes of blood.  
*Note: Collect blood in plain (red stopper) tubes before collecting blood in tubes with additives (e.g. EDTA) Mix tubes with additives well to prevent clotting.*
7. Release tourniquet, withdraw needle from vein, apply pressure on venipuncture site with dry sponge (cotton). Do not cover the injection site with an alcohol sponge while withdrawing needle.
8. Have patient apply pressure on the venipuncture site for 2-3 minutes to prevent leakage of blood under the skin and formation of a hematoma. When site no longer bleeds, a bandage may be applied if desired.
9. Label specimen tube with proper patient identification information.
10. Complete all requested information on the test request form.
11. Properly dispose of needles (in biohazard puncture proof sharps container) and other contaminated materials used during venipuncture.

**Specimen Preparation:**

1. Allow the tube of blood to remain undisturbed in an upright position at room temperature for 20-30 minutes.
2. After clot has formed gently loosen clot at the top; "rim" with a sterile applicator stick if necessary.
3. Centrifuge tubes for 10-15 minutes.
4. Remove serum carefully with sterile transfer pipet and transfer to a clean sterile rubber- stoppered tube or to a screw-top vial. Avoid transferring any red cells.
5. Label tube or vial with patient's name and/or code number running up the tube. Do not wrap around or Flag the label by pressing ends together and extending from the tube.
6. Store tubes of labeled serum in refrigerator (4E-6EC) until ready to ship to the laboratory.

**If sending whole blood in vacutainer tube, omit steps 2-4**

**If using separator (gel) tubes omit steps 2 and 4 above. Be sure gel forms a distinct barrier between serum and clot.**



## **DRIED BLOOD SPOTS FOR NEWBORN SCREENING HEEL-STICK PROCEDURE**

### **Supplies:**

The filter paper to be used in the collection of the specimen for the initial testing is attached to DHEC form 1327. This form is not pre-addressed because of the filter paper.

Pre-addressed envelopes for mailing are also available [See page II-1 to order.](#)

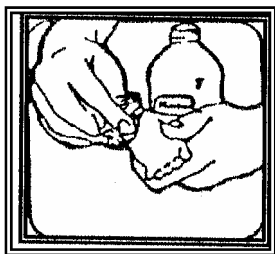
Blood should be collected **at least 24 hours after birth** or as closely as possible to the time of discharge from the hospital if discharged early. Specimens collected from infants receiving only non-lactose containing feedings must be clearly marked as such. Sufficient blood must be obtained to fill each circle by making a single application of the blood to the filter paper. The filter paper should touch only the drop of blood and should not be pressed against the skin around the puncture. Be sure that the filter paper is saturated with blood through to the other side. This may be done by heel puncture using a disposable blood lancet while holding the infants limb in a dependent position (Figure 8). **PLACING THE INFANT'S FOOT IN WARM WATER, OR WRAPPING IN A MOIST TOWEL OR DIAPER, AT A TEMPERATURE NO HIGHER THAN 42 C FOR 3 MINUTES,** aids in getting sufficient circulation to collect an adequate sample. Do not superimpose blood drops--this leads to inaccurate results.

When properly filled, the blood spot will be the same size on both sides of the filter paper. Do not send the specimen if the circles are not completely filled--collect a second sample. All the circles are needed if tests have to be repeated or additional tests run. After the filter paper specimen has been allowed to dry at room temperature for 4 hours or overnight, place in the mailing envelope. Mail samples to the laboratory within 24 hours after collection by first class mail.

### **PITFALLS**

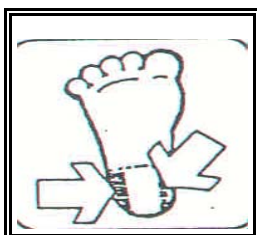
1. Failure to wipe off alcohol residue may dilute the specimen and adversely affect test results.
2. Puncturing the heel on posterior curvature will permit blood to flow away from puncture, making proper spotting difficult. **DO NOT LANCE ON PREVIOUS PUNCTURE.**
3. Milking or squeezing the puncture may cause hemolysis and a mixture of tissue fluids with the blood.
4. Capillary tubes may be used; however, we do not recommend this procedure since application of blood with a capillary tube results in scratching the surface of filter paper, adversely affecting test results.
5. Avoid touching area within circle before collection of blood spots on filter paper. Do not allow water, feeding formulas, antiseptic solutions, etc. to come in contact with the sample.
6. Do not place filter paper in the envelope until thoroughly dry.
7. **INSUFFICIENT DRYING ADVERSELY AFFECTS TEST RESULTS.**
8. **DO NOT SHIP DRIED BLOOD SPOT SPECIMENS IN PLASTIC BAGS.**

## DIRECTIONS FOR COLLECTING NEONATAL BLOOD SPOT SPECIMENS

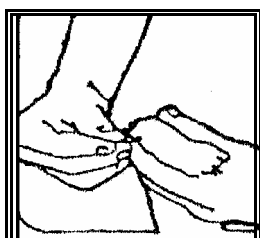


- 1.1 Cleanse infants heel with 70% isopropyl alcohol (use only rubbing alcohol)

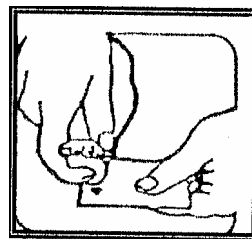
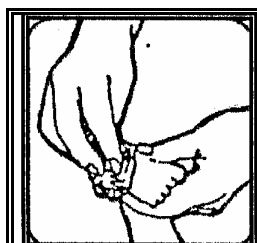
- 1.2 Allow heel to air dry
- 1.3 The puncture should be within the area shown Below



- 1.4 Using lancet, perform puncture



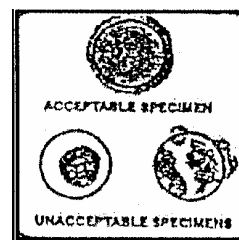
- 1.5 Gently wipe off first drop of blood with sterile gauze or cotton ball (initial drop contains tissue),



- 1.6 Wait for spontaneous flow of blood
- 1.7 Apply gentle pressure with thumb & ease intermittently as drops of blood form

- 1.8 Touch printed side of filter paper card to the blood spot & fill each printed circle with a SINGLE application of blood.

Observe the saturation of each printed circle as the blood flows through the filter paper. Spotting should be done only on the printed side. Do not layer successive drops of blood on the circle. If blood flow diminishes, repeat steps 1.1-1.8 to completely fill the circles



- 1.9 Allow blood specimen to AIR dry thoroughly on level non absorbent surface such as a plastic coated test tube rack at least 4 hours at room temp DO NOT stack or heat

- 1.10 Place dried filter paper forms into mailing envelope provided  
Mail within 24 hours.

Permission has been granted to use portions of the test of LA4-P Specimen Collection on filter paper for neonatal Hypothyroid Screening Programs ; by the National Committee for Clinical Laboratory Standards

## **DRIED BLOOD SPOTS FOR HIV TESTING FINGERSTICK PROCEDURE**

If a serum specimen cannot be obtained for HIV testing, dried blood spots from capillary blood may be substituted. The filter paper to be used in the collection of dried blood spots for HIV testing is attached to DHEC form 1339, the HEMOGLOBIN ELECTROPHORESIS/HIV REQUEST FORM. The block, 230 BLOOD SPOT HIV 1, in the lower right-hand corner must be checked. Envelopes for mailing specimen are also available. [See Page II-1 to order](#)

Sufficient blood must be obtained from the puncture to fill each circle by making a single application of the blood to the filter paper. The filter paper should touch only the drop of blood and should not be pressed against the skin around the puncture. Be sure that the filter paper is saturated with blood through to the other side. Do not superimpose blood drops--this leads to inaccurate results.

For infants less than one year puncturing the heel is recommended [See heel-stick procedure, page II-8](#) For older patients finger stick capillary blood is satisfactory:

1. Cleanse the 3rd or 4th finger with alcohol and dry with sterile gauze.
2. Puncture finger with sterile, disposable lancet.
3. Wipe away first drop of blood.
4. When next large drop of blood appears, touch filter paper circle to blood. Do not touch the filter paper to the skin.
5. Make single applications filling each circle. Do not superimpose blood drops.
6. Allow the specimen to dry at room temperature for 24 hours.

When properly filled, the blood spot will be the same size on both sides of the filter paper. Do not send the specimen if the circles are not completely filled--collect a second sample. All the circles are needed if tests have to be repeated or additional tests run. After the filter paper specimen has been allowed to dry at room temperature, place in the mailing envelope for shipping to Bureau of Laboratories.

### **PITFALLS**

1. Failure to wipe off alcohol residue may dilute the specimen and adversely affect test results.
  2. Puncturing the heel on posterior curvature will permit blood to flow away from puncture, making proper spotting difficult. **DO NOT LANCE ON PREVIOUS PUNCTURE.**
  3. Milking or squeezing the puncture may cause hemolysis and admixture of tissue fluids with specimen.
  4. Use of a capillary tube is not recommended since application of blood with a capillary tube results in scratching the surface of filter paper, adversely affecting test results.
  5. Avoid touching area within filter paper circles before blood is applied.
  6. Do not place filter paper in the envelope until thoroughly dry.
- INSUFFICIENT DRYING ADVERSELY AFFECTS TEST RESULTS.**

## **BLOOD LEAD SPECIAL COLLECTION PROCEDURES**

Venipuncture is the preferred method of specimen collection for blood lead determinations. Finger-stick and heel-stick specimens are acceptable, but require more rigorous cleaning and attention to detail to prevent contamination of the specimen during collection. All three collection methods provide a quantitative result. EDTA microtainers are available for finger and heel sticks. Use DHEC form 1323 and Write in Microtainers in blank space. .

### **Preparation :**

Routine procedures for the collection and handling of potential infectious materials should be observed. The collector should wash his hands and glove with dust-free gloves before preparing the patient for specimen collection. **Gloves which have dust on the exterior surface should be rinsed off with tap water.**

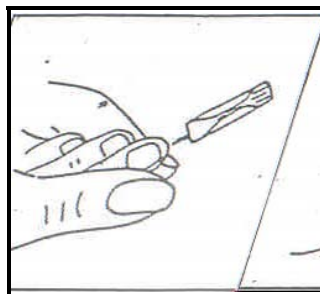
### **Venipuncture:**

1. Scrub the collection site with an alcohol wipe.
2. Dry with gauze.
3. Repeat steps a and b.
4. Do venipuncture. Use 3 ml or larger vacuum tube containing EDTA anticoagulant.
5. Mix the blood immediately after collection with the anticoagulant by gently rocking the specimen end to end several times.
6. Label tube with patient's name running up the tube. Do not wrap label around tube or press loose ends together to form a flag..
7. Complete DHEC form 1311, Lead Analysis request form. [See general instructions for completing, page II-3.](#)

### **Fingerstick:**

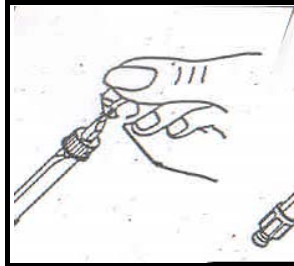
NOTE: Puncturing the fingers of infants less than 1 year of age is not recommended. Puncturing the heel is more suitable for these children (NCCLS, 1999).

1. Cleanse child's 3rd or 4th finger with an alcohol wipe.
2. Blot dry with gauze.
3. Repeat steps a and b.
4. Puncture finger with sterile lancet. See illustrations that follow.



## Blood Lead collection procedure, Page 2

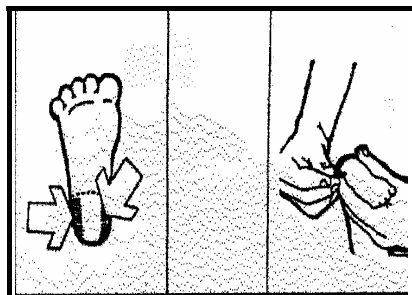
5. Allow the first drip of blood to fall onto gauze.
6. Touch the lip of collection tube into the blood and fill 3/4 full. Gently massage finger to keep blood flowing. Tilt the tube slightly outward from finger, gradually lowering the tube as it fills.



7. After sample has been collected, instruct mother to hold gauze on the child's finger until bleeding stops.
8. **.IMPORTANT:** Immediately after collection, mix blood thoroughly with the anticoagulant in the tube by gently rocking the tube end to end 8 times.
9. Label tube with patient's name and date of collection. Wrap label around tube and press loose ends together to form a flag extending from the tube. Do Not wrap label around cap
- 10.. Complete DHEC form. 1311, Lead analysis [.See general instructions for completing, Page II-3](#)

## HEEL-STICK (Used for children less than 1 year of age)

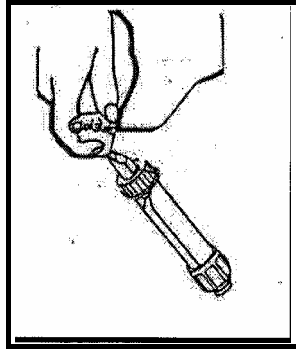
1. Cleanse infant's heel with an alcohol wipe.
2. Blot dry with gauze.
3. Repeat steps a. and b.
4. Using lancet perform puncture as illustrated Stay within the shaded areas.



5. Allow first drop of blood to fall onto gauze.

### **Blood Lead collection procedure, Page 3**

- 6.. Touch the lip of collection tube into the blood and fill 3/4 full. Gently massage the heel to keep blood flowing. Tilt tube slightly outward from heel. Gradually lower the tube as it fills. Apply gentle pressure with thumb and ease intermittently to maintain blood flow.



7. After sample has been collected, instruct the mother to hold gauze on the child's heel until bleeding stops.
8. **IMPORTANT:** Immediately after collection, mix blood thoroughly with the anticoagulant in the tube by gently rocking the tube end to end 8 times.
9. Label tube with patient's name and date of collection. Wrap label around tube and press loose ends together to form a flag extending from the tube.
10. Complete DHEC form 1311, Lead analysis request form [See general instructions for completing, page II-3.](#)

### **Specimen Preservation and Transport**

Blood specimens are more stable if refrigerated (4 degrees C) prior to shipment. It is not necessary to refrigerate the specimen during shipment. Mail specimens to the laboratory the same day they are collected if possible. [See section IV For appropriate shipping container, packaging and transport instructions.](#)

## **BLOOD COLLECTION FOR HEPATITIS C (HCV) TOTAL ANTIBODY and QUANTITATION (RNA)**

**Note:** This test is only available for DHEC HCV project sites or by special request

### **Principle:**

To properly collect a blood specimen for Hepatitis C, total antibody testing by EIA, and /or PCR Quantitation (RNA) and confirmation by RIBA

### **Patient preparation:**

No special preparation

### **Supplies:**

1. 1 Serum separator tube
2. Cold packs for shipping
3. DHEC form 1359, Diagnostic serology request form

### **Collection Procedure:**

#### **Precaution: Wear gloves when collection blood samples**

1. Use serum separator tube, and Collect a full tube of blood
2. Allow to clot at room temperature and centrifuge within four hours of collection. Invert the tube after centrifugation to verify that the serum separator is intact and no cells enter the serum. If cells enter the serum, repeat centrifugation. Same specimen can be used for both tests

### **Specimen Handling:**

1. Write the patient's name on the serum separator tube or use a patient label.
2. Complete a DHEC form 1359 [.See general instructions for completing, page II-3.](#) Under test Requested, write in test # 224 if this test does not appear on form.

### **Specimen Preservation and Transport**

1. Place the sample in a container with enough cold packs to maintain a temperature of 2° to 8° C during shipment. Sample must arrive at the laboratory within 24 hours of collection.
2. Label the outside of the container as HCV Viral Load  
Note: The HCV samples can be shipped with HIV-I RNA Viral Load samples if desired.
3. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

### **Causes for Specimen Rejection:**

1. Serum separator tube not used
2. Specimen not shipped with cold packs or specimen no cold on arrival.
3. Universal rejections, see page I-7

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## RECOMMENDED CULTURE SITES FOR COMMONLY ENCOUNTERED ORGANISMS

The following list the usual sites of the commonly encountered organisms. The procedures in this section will give instructions for collecting and submitting specimens for culture at DHEC Bureau of Laboratories.

### BACTERIAL CULTURES

1. Culture: Beta Strep  
Throat swab  
Vaginal/Rectal swab
2. Culture: Bordetella pertussis  
NP Swab
3. Culture: Chlamydia trachomatis  
Cervical  
Male urethral  
Rectal swab  
Respiratory
4. Culture: Clostridium difficile  
Stool (feces)  
Toxin testing not available.
- 5.. Culture: Legionella  
Bronchial wash  
Lung tissue  
Pleural fluid  
Sputum
6. Culture: Mycobacteria  
Biopsy  
Blood  
Body fluid (CSF, joint, pleural)  
Drainage  
Gastric washing  
Sputum  
Stool
7. Culture: Neisseria gonorrhoeae  
Cervical  
Eye  
Rectal  
Urethral-female  
Urethral-male  
Vaginal  
Throat

### BACTERIAL CULTURES

8. Culture: Mycoplasma/Ureaplasma  
Endometrial washings  
Placenta  
Sputum  
Urethral swab  
Urine

### VIRAL CULTURES

1. Culture: Adenovirus  
Conjunctival swab  
CSF  
N/P swab  
Throat Swab  
Tissue  
Urine  
Rectal Swab
2. Culture: Cytomegalovirus (CMV)  
Blood  
Peripheral (buffy coat)  
Tissue  
Urine (preferred)
3. Culture: Enterovirus  
CSF  
N/P swab  
Rectal swab  
Stool  
Throat Swab
4. Culture: Herpes  
Cervical swab  
CSF  
Genital lesions  
N/P swab  
Tissues  
Vaginal
5. Culture: Influenza  
N/P swab  
Throat Swab

**Culture sites, page 2**

**FUNGAL CULTURES**

1. Culture: Fungus
  - Aspirates
  - Body fluids (CSF)
  - Blood
  - Bone
  - Bronchial washing
  - Conjunctival swab
  - Hair, Nail or Skin scrapings
  - Sputum
  - Throat swab

**VIRAL CULTURES, CONT**

6. Culture: Mumps
  - CSF
  - Throat swab
  - Urine
7. Culture: Parainfluenza
  - N/P swab
  - Throat Swab
8. Culture: Rubella
  - Throat Swab
9. Culture: Varicella
  - Vesicle fluid

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## SPECIMEN COLLECTION FOR CULTURE OF ENTERIC PATHOGENS

### Principle:

To properly collect a stool specimen for the isolation of the following enteric pathogens: *E coli 0157*, *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, *Vibrio*, *Staphylococcus*, *Clostridium perfringens*\* and *Bacillus cereus*.

### Patient Preparation:

No special preparation.

### Supplies:

1. Wide-mouthed container.
2. Enteric kit: with Cary-Blair transport media. [See page II-1 to order](#). Store kit at room temperature until used.
3. DHEC form 1345, Bacteriology request form (orange)

### Collection Precautions:

**Wear gloves when collecting stool specimens.**

### Collection Procedure (Stool):

1. Collect stool in a clean (not necessarily sterile) wide-mouthed container that can be covered with a tight-fitting lid. These containers must be free of preservatives and detergents.
2. DO NOT COLLECT SPECIMEN FROM TOILET. AVOID CONTAMINATION WITH URINE.
3. Infant specimens may be collected in a disposable diaper with plastic side facing inside.
4. Collect a walnut sized piece if stool is formed or 5-10 ml if stool is liquid.

### Cary-Blair Transport media

NOTE: Routine culture includes testing for *Salmonella*, *Shigella*, *Campyloacter*, and *E. coli 0157*. Request for culture of other specific pathogens must be indicated on the laboratory request form.

For formed feces, use a tongue depressor or the spoon inside the lid to transfer solid, walnut size portion of stool.

For liquid feces, use a pipette, to transfer 5-10 ml of liquid stool to the transport media. Replace cap on tube and store at room temperature until transported.

### Directions for unpreserved specimens for *C. Perfringens* quantitation \*.

Submit a minimum of a walnut sized portion of feces in a sterile leak-proof container. Specimen must be shipped on a cold pack and **must arrive at the laboratory in less than 24 hours from the time of collection.**

## **Specimen collection for culture of Enteric Pathogens, page 2 of 2**

### **Specimen Handling:**

1. Place a patient identification label on the transport medium
2. Complete a DHEC form 1345 to accompany specimen. [See instructions for completing, pg II-3](#)

Be sure to complete additional test specific information

Specimen Site: Mark X by .Feces

Date Collected

Organism Suspected: Indicate name of suspected.

Test Requested: Mark 508 - feces for enteric culture.

### **Specimen Preservation and Transport:**

1. **Do not refrigerate** Ship specimens in transport media at room temperature. Specimen should be received within 48 hours of collection.
2. Ship unpreserved feces for *C. Perfringens* quantitation on an ice pack. Specimens not in holding medium must be shipped immediately in order to be inoculated within 24 hours of collection.
3. [See section IV for appropriate shipping container, packaging and transport instructions](#)

### **Specimen Rejection:**

1. Specimen too old.
2. Use of improper transport media or transport conditions.
3. Insufficient quantity
4. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF *NEISSERIA GONORRHOEAE*

### **Principle:**

To properly collect an eye culture, rectal culture and oropharyngeal culture for the diagnosis of *Neisseria gonorrhoeae*.

To properly collect a cervical, urethral and vaginal culture in cases of assault or sexual abuse.

### **Patient Preparation:**

For urethral culture: Males

1. The patient should not have voided for at least 1 hour before performing a culture, especially men without a discharge.

### **Supplies:**

1. Sterile Dacron or Rayon swab
2. Sterile thin, flexible wire with Dacron or Rayon swab (males)
3. GC culture kit with Transgrow bottle for *Neisseria gonorrhoeae* .[See page II-1to order.](#)
4. DHEC form 1325B, GC culture
5. Speculum (cervical, vaginal)

### **Collection Precautions: (All specimens)**

**Wear Disposable Gloves And Protective Eye Wear When Collecting And Handling Specimens.**

### **Collection Procedure: (Eye)**

1. Touch a sterile swab to purulent discharge.
2. If necessary, lower eyelid may be pulled down and the swab touched to the conjunctival mucosa.
3. Inoculate Transgrow bottles for *N. gonorrhoeae* as described under Inoculation of Transgrow medium

### **Collection Procedure: (Rectal)**

1. Have the patient bear down slightly for ease in insertion of swab.
2. Insert a sterile swab approximately 3 cm into the anal canal using lateral pressure to avoid entering any fecal mass. If gross fecal contamination of the swab occurs, it should be discarded into a biohazard container and a repeat specimen obtained.
3. Rotate the swab to sample crypts just inside the anal ring and allow the swab to remain in the anal area for several seconds for better absorption of organisms onto the swab.
4. Inoculate Transgrow bottles for *N. gonorrhoeae* as described under Inoculation of Transgrow medium.

## **Specimen collection for culture of *Neisseria gonorrhoeae* - page 2 of 3**

### **Collection Procedure: (Oropharyngeal [Throat])**

1. Using a tongue blade to hold the tongue down, take a specimen directly from the back of the throat, carefully avoiding contact with teeth, cheeks, gums or tongue when inserting or removing the swab.
2. Rub a sterile swab over the back wall of the throat and tonsillar crypts.
3. Inoculate Transgrow bottles for *N. gonorrhea* as described under Inoculation of Transgrow Medium..

### **Collection Procedure: (Cervical)**

1. Obtain the cervical specimen with the aid of a speculum that has been moistened with water. Other lubricants may contain antibacterial agents.
2. Insert the speculum and if unable to visualize the cervical os, remove excess mucus with a swab.
3. Insert another sterile swab into the endocervical canal approximately 2-3 cm. Move the swab in a rotary motion for a few seconds to permit absorption of the exudate. If the patient is pregnant, and there has been no vaginal bleeding, insert swab into the endocervix only until the tip is no longer visible and rotate gently for a few seconds).
4. Inoculate Transgrow bottles or culture plates for *N. gonorrhoeae* as described under inoculation of Transgrow medium

### **Collection Procedure: (Vaginal) for Children and Hysterectomy Patients Only**

1. Insert the speculum.
2. With a sterile swab obtain the specimen from the posterior vaginal vault.
3. Allow a few seconds for absorption of material.
4. If the hymen is intact, a swab of the vaginal orifice will suffice.
5. Inoculate Transgrow bottles for *N. gonorrhoeae* as described under Inoculation of Transgrow medium.

### **Collection Procedure: (Urethral Culture - Females)**

1. Massage the urethra against the pubic symphysis from vagina to orifice to express any discharge.
2. If no discharge is evident, insert a sterile flexible thin wire swab approximately 2 cm into the urethra and rotate for several seconds.
3. Withdraw swab and inoculate Transgrow bottles as described under Inoculation of Transgrow medium.

### **Collection Procedure: (Urethral - Males)**

1. Insert a sterile flexible swab with a thin wire shaft 2-4 cm into the urethra.
2. Once inserted, rotate the swab gently to ensure contact with all urethral surfaces.
3. Leave inserted for 2-3 seconds for better absorption of material.
4. Withdraw the swab and inoculate Transgrow bottle as described under Inoculation of Transgrow medium.



## Specimen collection for culture of *Neisseria gonorrhoeae* - page 3 of 3

### Inoculation of Transgrow Medium

1. Have the Transgrow medium at **room temperature and check the expiration date** before inoculation.
2. Hold the bottle in an upright position. Remove the cap from the bottle only when ready to inoculate.
3. Soak up excess moisture in the bottle with the specimen swab and roll the swab from side to side over the entire surface of the medium starting at the bottom of the bottle.
4. Remove swab from bottle and discard into a biohazard container.
5. Recap the bottle tightly.

### Specimen Handling :

1. Place label with patient's name on back of Transgrow bottle where chocolate colored medium is layered. **Do not place label on top clear side of bottle.** The clear glass window is needed to observe for growth.
2. Complete a DHEC form 1325B or 1345 to accompany specimen. [See instructions for completing, Pg II-3.](#) Be sure to complete test specific information.  
Specimen: Mark X in the appropriate box. If Other is checked, write in the specimen site.  
Was Culture Incubated Before Transport?: mark X in the appropriate box.  
Reason for Test: Mark X in the appropriate box.  
If Other is checked, write in reason for test.  
Test Requested: Mark X in the appropriate box.

### Specimen Preservation and Transport:

1. Place the Transgrow bottle in an upright position in an incubator set at 35°C as soon as possible after inoculation. The sooner the culture is placed in an incubator, the better the chance of recovery of *N. gonorrhoeae*. **Never refrigerate the Transgrow medium after inoculation as cold temperature will rapidly kill gonococci.**
2. If an incubator is not available, make sure culture is shipped on the same day as collected. If an incubator is available, incubate until ready to ship
3. If the specimen is collected on Friday and cannot be shipped until Monday, incubate over the weekend, but remove first thing Monday morning to prevent overgrowth of contaminants.
4. If state courier is used, cultures collected on Friday may be shipped on Friday and marked as not incubated.
5. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

### Specimen Rejection:

1. Transgrow media not used or Transgrow media expired.
2. Specimen in transit for more than 5 days.
3. Universal rejections, see page I-7

# SPECIMEN COLLECTION FOR CULTURE OF GROUP A BETA HEMOLYTIC STREPTOCOCCUS OR DIPHTHERIA

## Principle:

To properly collect a throat swab for the culture of Beta Strep Group A or *C. diphtheria*

## Patient Preparation:

No special preparation.

## Supplies:

1. Culturette swab kit containing Stuart's medium [Use form 1323 to order and indicate culturette in blank space on form](#)
2. DHEC form 1345, Bacteriology request form (orange)

## Collection Procedure for Throat Swab:

1. Shine a bright light if possible over the shoulder of the specimen collector into the oral cavity of the patient so that the swab can be guided to the posterior pharynx.
2. The patient is instructed to tilt his/her head back and breathe deeply.
3. Depress the tongue with a tongue depressor to help visualize the posterior pharynx. Use culturette kit. Do not use calcium alginate swabs.
4. Extend the swab to the back of the throat between the tonsillar pillars and behind the uvula.
5. Have the patient phonate a long aah which will lift the uvula and help to prevent gagging.
6. The tonsillar areas and posterior pharynx should be firmly rubbed with the swab.
7. Care should be taken not to touch the teeth, cheeks, gums or tongue when inserting or removing the swab to minimize contamination with normal mouth flora.
8. After collection, place the swab back into the culturette and break or squeeze the ampule.

Note: Notify the DHEC Bacteriology Section (803-896-0805) when a diphtheria specimen is to be collected so that special isolation media can be prepared.

## Specimen Handling

1. Place a patient label on a culturette swab kit.
2. Complete a DHEC form 1345 to accompany specimen. [See general instructions for completing, page II-3.](#) Be sure to complete test specific information:  
Specimen Site: Mark X in the appropriate box. If Other is marked, enter the site.  
Test Requested: Mark X in the appropriate box.  
Organism suspected: Indicate Group A strep or diphtheria

## Specimen Preservation and Transport

1. Store and ship culturette at room temperature
2. [See section IV for appropriate shipping container, packaging and transport instructions](#)

## Specimen Rejection

1. Ampule in culturette not crushed.
2. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF GROUP B BETA-HEMOLYTIC STREPTOCOCCUS

**Principle:**

To properly collect a vaginal or rectal culture for the detection of beta-hemolytic Group B Streptococcus or *Streptococcus agalactiae*.

**Patient Preparation:**

No special preparation.

**Supplies:**

1. Culturette swab kit [Use form 1323 to order and indicate culturette in blank space.](#)
2. DHEC form 1345, Bacteriology request form (orange)
3. Speculum

**Collection Procedure: (Vaginal)**

1. Insert the speculum.
2. With the Culturette swab obtain the specimen from the posterior vaginal vault.
3. Allow a few seconds for absorption of material.
4. Place the swab back into the culturette and break or the ampule.

**Collection Procedure: (Rectal)**

1. Have the patient bear down slightly for ease in insertion of swab.
2. Insert the culturette swab approximately 3 cm into the anal canal using lateral pressure to avoid entering any fecal mass. If gross fecal contamination of the swab occurs, it should be discarded into a biohazard container and a repeat specimen obtained.
3. Rotate the swab to sample crypts just inside the anal ring and allow the swab to remain in the anal area for several seconds for better absorption of organisms onto the swab.
4. Place the swab back into the culturette and break the ampule

**Specimen Handling:**

1. Place a patient label on the culturette swab kit.
2. Complete a DHEC form 1345 accompany specimen [See general instructions for completing, page II-3.](#) Be sure to complete additional test specific information  
Specimen Site  
Organism Suspected:  
Test Required: Mark "X" in 510 box (misc. clinical specimen for culture)

**Specimen Preservation and Transport:**

1. Store and ship culturette at room temperature
2. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

## **Specimen collection for culture of group B beta strep, page 2 of 2**

### **Specimen Rejection:**

1. Ampule in culturette not crushed.
2. Swab contaminated with feces
3. Universal rejections, page I-7

## SPECIMEN COLLECTION FOR CULTURE OF *CHLAMYDIA TRACHOMATIS*

**NOTE: CULTURE IS NOT AVAILABLE FOR THE SCREENING AND ROUTINE DIAGNOSIS OF FEMALE ENDOCERVICAL AND MALE URETHRAL INFECTIONS.**

**CONJUNCTIVAL SWABS MAY BE SUBMITTED FOR CULTURE OR THE GEN- PROBE DNA PROBE TEST.** (See instructions for submission of these specimens under other procedure, Gen-Probe).

**RECTAL OR NASOPHARYNGEAL SPECIMENS SHOULD BE SUBMITTED FOR CULTURE. GEN-PROBE IS NOT APPROPRIATE IN CASES OF ASSAULT OR SEXUAL ABUSE.**

### **Principle:**

To properly collect an eye, rectal and nasopharyngeal specimen (chlamydial pneumonia) for the isolation of Chlamydia:

### **Patient Preparation:**

For urethral culture: Males

The patient should not have urinated for at least one (1) hour prior to culture collection.

### **Supplies:**

1. Sterile cotton-tipped swabs with plastic shafts.
2. Sterile cotton-tipped swabs with wire shafts.
3. 2 SP Chlamydia transport media for Chlamydia culture [See page II-1 to order](#)  
Store media in refrigerator until needed
4. DHEC form 1325B or 1337, Bacteriology request form (1335B is being discontinued)
6. Speculum for cervical, vaginal culture.
7. Large cotton-tipped swabs for cervical culture.

**DO NOT USE SWABS WITH WOODEN SHAFTS AS THESE ARE TOXIC TO CHLAMYDIA.**

### **Collection Precautions:**

**Wear disposable gloves and protective eyewear when collecting and handling specimens.**

### **Collection Procedure: (Eye)**

Eye cultures can also be submitted for Gen-probe. See Gen-Probe collection procedure.

1. Use a sterile cotton-tipped swab to remove pus or discharge from the eye.  
Discard this swab into a biohazard container.
2. Moisten a sterile cotton-tipped swab with chlamydial transport medium and vigorously swab the afflicted conjunctiva. Place the swab into a tube of Chlamydial transport medium. Care should be taken so that swabbing is sufficient to recover epithelial cells.
3. Rotate the swab to elute the specimen into the medium. The swab may be left in the medium. Recap the medium.
4. Refrigerate the sample until it can be transported to the Bureau of Laboratories  
Specimens should be sent without delay.

## **Specimen collection for culture of *Chlamydia trachomatis* - page 2 of 3**

### **Collection Procedure: (Nasopharyngeal)**

Chlamydia may be isolated from cases of Chlamydial pneumonia by one of several methods. A nasopharyngeal swab can be expected to produce a significant number of positive cultures from cases of chlamydial pneumonitis.

1. With the thumb of one hand, gently elevate the tip of the patient's nose.
2. Moisten the tip of a cotton-tipped swab with a wire shaft with Chlamydial transport medium or saline and gently insert it into the patient's nares.
3. Guide the swab backward and upward along the nasal septum until a distinct give of resistance is met.
4. Rotate the swab and gently remove it.
5. Place the swab in Chlamydia transport medium and rotate the swab into the medium.
6. Leave the swab in the medium and recap.
7. Refrigerate the medium until it can be transported to the Bureau of Laboratories.

### **Collection Procedure: (Rectal)**

1. Have the patient bear down slightly for ease in insertion of swab.
2. Moisten the tip of a sterile cotton-tipped swab with Chlamydial (2SP) transport medium and insert the swab approximately 3 cm into the anal canal using lateral pressure to avoid entering any fecal mass. If gross fecal contamination of the swab occurs, it should be discarded into a biohazard container and a repeat specimen obtained.
3. Rotate the swab to sample crypts just inside the anal ring and allow the swab to remain in the anal area for several seconds for better absorption of organisms onto the swab.
4. Withdraw the swab and place it into Chlamydial (2SP) transport medium. Rotate the swab in the medium.
5. Leave the swab in the medium and recap.
6. Refrigerate sample until it can be transported to the Bureau of Laboratories.

### **Collection Procedure: (Male Urethral)**

1. Patient should not have urinated for at least 1 hour prior to sample collection.
2. Insert swab for collection kit 2-4 cm into urethra.
3. Once inserted, rotate swab gently at least on full rotation using sufficient pressure to insure swab comes into contact with all urethral surfaces. Allow swab to remain inserted for 2 to 3 seconds.
4. Withdraw swab. Place the swab in the Chlamydial(2SP) transport medium and rotate the swab in the medium to elute the specimen.
5. Leave the swab in the medium and recap the medium.
6. Refrigerate the sample until it can be transported to the Bureau of Laboratories.

### **Collection Procedure: (Cervical)**

1. Obtain the cervical specimen with the aid of a speculum that has been moistened with water. Other lubricants may contain antibacterial agents.
2. Insert the speculum and if unable to visualize the cervical OS, remove excess mucus with a large cotton-tipped swab.

### **Specimen collection for culture of *Chlamydia trachomatis* - Page 3 of 3**

3. Moisten a sterile cotton-tipped swab with chlamydial transport medium or saline and insert the swab into the endocervical canal approximately 2-3 cm. Move the swab in a rotary motion with sufficient pressure to collect cells for 10-30 seconds. Since Chlamydia are intracellular pathogens, it is important to obtain cervical cells. (Note: If the patient is pregnant question her about vaginal bleeding or leakage of fluid from the vagina. If bleeding or leakage has occurred, DO NOT culture and refer patient to MD. If no bleeding or leakage has occurred, insert swab into the endocervix only until the cotton tip is no longer visible and rotate gently 10-30 seconds).
4. Remove the swab without touching the vaginal mucosa.
5. Place the swab in the Chlamydial(2SP) transport medium and rotate the swab in the medium to elute the specimen. Leave the swab in the medium and recap the medium.
6. Refrigerate the sample until it can be transported to the Bureau of Laboratories.

#### **Collection Procedure: (Vaginal [Children and Hysterectomy Patients])**

1. Insert speculum after moistening with water.
2. Moisten a sterile cotton-tipped swab with Chlamydial transport medium or saline.
3. Insert swab and obtain the specimen by rotating the swab in the posterior vaginal vault. Allow a few seconds for absorption of material.
4. Since Chlamydia are intracellular pathogens it is important to obtain both exudate and cells.
5. Remove the swab and place it in chlamydial transport medium.
6. Rotate the swab in the transport medium to elute the specimen.
7. Leave the swab in the medium and recap.
8. Refrigerate the sample until it can be transported to the Bureau of Laboratories.

#### **Specimen Handling:**

1. Place a patient label on the collection tube containing swab..
2. Complete a DHEC form 1337 or 1325B (being discontinued) to accompany specimen [See instructions for completing, page II-3](#). Be sure to complete additional test specific information

#### **Specimen Preservation and Transport:**

1. Refrigerate specimen until it can be transported.
2. Ship with cold packs in a biohazard bag **within 24-48 hours after collection.**
3. If shipping is delayed, freeze at -70 C and ship on dry ice **Do not freeze at -20C**
4. [See section IV for appropriate shipping container, packaging, and transport instructions.](#)

#### **Specimen Rejection:**

1. Improper transport medium.
2. Specimen not cold on arrival
3. Universal rejections, see page I-7

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## SPECIMEN COLLECTION FOR FUNGAL CULTURE (HAIR, SKIN AND NAILS)

**Principle:**

To properly collect hair, skin scrapings and nails for the isolation and diagnosis of dermatophytes or ringworm.

**Patient Preparation:**

No special preparation.

**Supplies:**

1. Sterile screw capped container or sterile petri dish
2. Forceps
3. Scalpel blade or glass slide
4. Nail clippers
5. 70% alcohol pads
6. DHEC form 1333, Mycology request form ( lavender)

**Collection Procedure: (Hair, nails and skin)**

Prior consultation required. Call mycology laboratory, 803-896-0961

**Hair:**

1. With forceps, collect 8-10 short, broken hairs and roots.
2. Hairs should be collected from areas of scaling or balding.
3. Place hairs in sterile container.

**Nails:**

1. Wipe nail with 70% alcohol.
2. The nail surface should be scraped off with a scalpel. Collect deeper nail scrapings along with scrapings from under the leading edge of the nail.
3. Place material in sterile container or an envelope

**Skin Scrapings:**

1. Clean lesion with 70% alcohol to remove surface bacterial contaminants.
2. Scrape the periphery or growing margin of the lesion with a scalpel blade or the side of a clean glass slide.
3. Place scrapings into a sterile container.

**Specimen Handling**

1. Place a patient label on the sterile container.
2. Complete a DHEC form 1333 to accompany specimen [See general instructions for completing, page II-3.](#) Be sure to complete additional test specific information  
Agent Suspected: Indicate organism or type organism suspected  
Patient: Mark "X" in the 301 box  
Source of Specimen: Mark "X" in appropriate box (skin, hair, nails).

## **Specimen collection for Fungal Culture, Hair, Skin and Nails, page 2 of 2**

### **Specimen Preservation and Transport:**

1. Store and ship at room temperature.
2. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

### **Specimen Rejection:**

Universal rejections, page I-7

## SPECIMEN COLLECTION FOR FUNGAL CULTURE (SPUTUM)

### **Principle:**

To properly collect a sputum specimen for the diagnosis of a fungal infection.

### **Supplies:**

1. Use Sputum collection kit for TB and change outside mailing container label to say: Attn: Mycology. [See page II-1 to order.](#)
2. DHEC form 1333, Mycology request form (lavender).

### **Patient Preparation:**

Prior to breakfast, the patient should brush his/her teeth and/or rinse with water, or mouthwash before obtaining the sputum specimen. A clean mouth reduces the overgrowth of mouth flora.

### **Collection Procedure:**

1. Remove the cap from the sterile container without touching the inside of the container. This will avoid contamination of the specimen which results in having to submit another specimen.
2. Patient is instructed to take a deep breath, hold it momentarily and cough deeply from the deepest part of the chest.
3. Sputum from the lungs is collected into the appropriate sterile container until at least 5 ml or 1 teaspoon is obtained. Replace the lid on the container. A minimum of 5 ml is needed for culture. **Saliva and nasal secretions are not satisfactory.** Sputum specimens should be free of food particles and other extraneous material.
4. Avoid soiling the outside of the container. If soiling with sputum occurs, wipe with a cloth wet with alcohol, soap and water or 1:10 bleach solution, then wash hands.
5. Replace the cap on container

### **Specimen Handling .**

1. Label a sterile screw cap container with the patient's label.
2. Complete a DHEC form 1333 to accompany specimen ([see general instructions for completing, page II-3](#)). Be sure to complete specific test information  
Agent Suspected: Enter the suspected agent.  
Specimen Source: Mark "X" in the appropriate box. If "Other" is marked, enter site..

### **Specimen Preservation and Transport:**

1. Place the collection container in the metal can and close screw cap securely
2. Place the metal can in fiberboard mailing container
3. Store and ship specimen at room temperature Ship within 24 hours after collection
4. [See section IV for appropriate shipping container, packaging. And transport instructions.](#)

## **Specimen collection for Fungal culture, page 2 of 2**

### **Specimen Rejection:**

1. Sputum specimen > 24 hours old when shipped
2. Sputum specimen contaminated with saliva.
3. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF MYCOBACTERIUM (TB)

### **Principle:**

To properly collect a sputum or urine specimen for the diagnosing and monitoring of tuberculosis and other mycobacterial infections.

### **Supplies:**

1. (a) Mycobacteriology collection kit (50 ml plastic sputum collection tube, metal can and cardboard mailing container) [See page II-1 to order.](#)  
(b) Sterile screw cap container with a round opening of at least 2 inches for urine
2. DHEC form 1306, Mycobacteriology request form (gold)
3. Particulate respirator (PR)

### **Collection Procedure: (All Specimens)**

**WEAR DISPOSABLE GLOVES AND A PARTICULATE RESPIRATOR WHEN COLLECTING SPECIMENS.**

### **Patient Preparation: (Sputum)**

1. Explain to patient the importance of how to collect and handle a sputum specimen. Give the patient the sputum collection kit and COLLECTION OF SPUTUM SPECIMENS FOR MYCOBACTERIA (TB) sheet.
2. If the nurse must remain with the patient while he/she is coughing and the patient is known or suspected of being infectious (smear or culture positive), the nurse should wear a particulate respirator.
3. Have the patient collect an early morning sputum sample.
4. Ask the patient to breathe deeply, exhale, then cough deeply. Steam from a hot shower or a boiling kettle may help to stimulate the flow of secretions. Also, drinking several or other non alcoholic liquids will hydrate the dry patient and assist in raising sputum.
5. Patient should brush his/her teeth and/or rinse with water, not an antiseptic solution before obtaining the sputum specimen. A clean mouth reduces the overgrowth of mouth flora,
6. The patient should submit a series of three(3) sputum samples over a period of three days (one/day), if specimens are being collected for initial diagnosis.

### **Collection: (Sputum)**

1. Remove the cap from the sterile container without touching the inside of the container. This will avoid contamination of the specimen which results in having to submit another specimen.
2. Patient is instructed to take a deep breath, hold it momentarily and cough deeply from the deepest part of the chest. Saliva and nasal secretions which contain few acid-fast bacteria are not to be collected.

## **Specimen collection for culture of Mycobacterium- page 2 of 6**

3. Instruct the patient to spit the sputum into the appropriate sterile container until at least 5 ml or 1 teaspoon is obtained. Replace cap on the container. A minimum of 5 ml is needed for culture.
4. Avoid soiling the outside of the container. If soiling with sputum occurs, wipe with a clean cloth wet with alcohol soap and water, or 1:10 bleach solution, then wash hands.
5. Sputum specimens should be free of food particles and other extraneous material.
6. Place the cap on plastic tube or sterile container and screw to close tightly.

If patient is to collect sputum in the home, give patient sputum collection and mailing containers and instruction sheet on how to obtain a sputum sample.

### **Collection Procedure: (Urine)**

The patient should submit a series of three (3) urine samples over a period of three days (one/day) if specimens are being collected for initial diagnosis.

#### Female- midstream voided:

1. Have patient thoroughly clean the urethral area with soap and water.
2. Instruct patient to sit on toilet, and to manually separate labia minora with one hand and keep them separated while voiding the first portion of urine into the toilet.
3. After several ml have passed, have patient collect the midstream portion into the specimen container without stopping the flow of urine. Try to avoid touching the lip or inside of the container with the hand.
4. Have the patient finish voiding into the toilet.
5. Amount of urine needed is 10 ml. Screw cap on plastic tube to close tightly.

#### Male-midstream voided:

1. Clean the glans with soap and water.
2. While holding foreskin retracted, begin voiding.
3. After several ml have passed collect the midstream portion into the appropriate container without stopping flow of urine.
4. Have the patient finish voiding into the toilet.
5. Amount of urine needed is 10 ml. Screw cap on plastic tube to close tightly.

For collection procedures on other specimens see chart on Collection and Shipment of Mycobacterial Specimens.

### **Specimen Handling:**

1. Place a patient identification label on the 50 ml screw capped tube.
2. Complete a DHEC form 1306 to accompany specimen [See general instructions for completing, page II-3](#). Be sure to complete test specific information:
  - Agent suspected: Enter the suspected agent
  - Specimen source: Mark "X" in the appropriate box. Mark "X" as to "New Case", "Old Case", "First Specimen", or "Repeat".
  - Date Collected: **If repeat, date last specimen submitted:**

## **Specimen collection for culture of Mycobacterium - page 3 of 6**

Therapy Status: Mark “X” in the appropriate box

Date Stopped: If “Previous” is marked, enter date therapy stopped

Current Drugs: Mark “X” in the appropriate box as follows:

INH - Isoniazid

KM - Kanamycin

EMB - Ethambutol

CS - Cycloserine

RF - Rifampin (Rifampicin)

PZA - Pyrazinamide

SM - Streptomycin

ETA - Ethionamide

PAS - P-Amino salicylate

NOTE: All clinical specimens should be ordered using Test Code 601. Test Code 602 is reserved exclusively for the use of hospital or other laboratories which have isolated mycobacteria and need to have them identified. County health departments and hospitals not performing Mycobacteriology isolation activities should not use Test Code 602. Tests 601 and 602 are mutually exclusive. Do not order both. It is not necessary to request drug susceptibility testing (Test Code 604) when submitting specimens from suspected new cases of tuberculosis. The Mycobacteriology Section continues to test all initial isolates of M tuberculosis for their susceptibility to INH, rifampin, ethambutol, streptomycin and pyrazinamide.

### **Specimen Preservation and Transport:**

#### **Sputum:**

1. Refrigerate samples if shipping is delayed over 24 hours. This will decrease overgrowth of other microorganisms which delay culture results.
2. Place the collection tube in the metal can and close screw cap securely. Be sure neither plastic tube nor metal can are soiled with sputum or urine.
3. Wrap the completed DHEC 1306 laboratory form around the metal can. Be sure the date the specimen was collected is on the form. If the laboratory form is around the plastic tube instead of the metal can the laboratory must autoclave it before it can be handled.
4. Place the metal can in the pre-addressed, round cardboard mailing container
5. Mail specimen on the day it was collected, if possible, but do not mail specimen on Fridays. Refrigerate the carton until mailed.

#### **Urine.**

1. If specimen is urine, ship cold with cold packs. Place a plastic bag over the fiberboard carton and place in a Styrofoam cooler with cold packs for transportation.
2. Label outside of cooler as Urine for TB testing

### **Specimen Rejection:**

1. Specimen broken or leaked in transit Sterile body fluids may be processed with the approval of the Supervisor or Division Director.
2. Specimen > 5 days old.
3. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF MYCOBACTERIA (TB)

TYPE SPECIMEN	COLLECTION TIME	AMOUNT	NUMBER OF SPECIMENS	TYPE CONTAINER	SPECIAL PROCEDURE
Sputum	Early AM Upon Waking	5-10 ml.	Series of 3 One/Day	Mycobacter- iology (TB) collection kit	Sputum-material coughed up from deep in lungs- not saliva
Urine	Early AM	Entire specimen, centrifuge 10 ml.	Series of 3 One/Day	Same	Voided midstream specimen collected as aseptically as possible. Transport to lab immediately.
Gastric Washing	Early AM	10 ml.	1 or more as needed	Same	No food after midnight. Pass 20-50 ml. sterile distilled water through stomach tube and draw off specimen in sterile tube.
Biopsy				Same	No fixative or preservatives (saline only)
Feces		Formed-send walnut sized portion Liquid-send 10 ml.	1 or more as needed	Same	
Sterile body fluids other than blood (spinal, joint, pleural, etc.)		10 ml.	1 or more as needed	Same	
Swabs of drainage or other material				Same	Use small amt of sterile saline to keep swab moist. <b>Do not use transport media . Swabs are not usually productive specimens for mycobacteria.</b>



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**Insert collection diagram**

**Sputum collection for culture of Mycobacteria (TB)**

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## SPECIMEN COLLECTION FOR CULTURE OF MYCOPLASMA/UREAPLASMA

**Principle:**

To properly collect a cervical specimen for the culture of Mycoplasma or Ureaplasma

**Patient Preparation:**

No special preparation.

**Supplies:**

1. Sterile cotton-tipped swab
2. Speculum
3. Mycoplasma hominis/Ureaplasma transport medium (sent directly from Virology Section. Call 803-896-0919 to obtain
4. DHEC form 1337, Viral Isolation request form (pink)

**Collection Precautions:**

**WEAR DISPOSABLE GLOVES AND PROTECTIVE EYEWARE WHEN COLLECTING AND HANDLING SPECIMENS.**

**Collection Procedure: (Cervical)**

**DO NOT USE SWABS WITH WOODEN SHAFTS TO COLLECT SPECIMEN**

1. Obtain the cervical specimen with the aid of a speculum that has been moistened with water. Other lubricants may contain antibacterial agents.
2. Insert sterile cotton-tipped swab into the endocervical canal approximately 2-3 cm. and swab the cervical OS and the vaginal area. Insert swab into the endocervix only until the cotton tip is no longer visible and rotate gently 10-30 seconds. (Note: if the patient is pregnant, question her about vaginal bleeding or leakage of fluid from the vagina. If either has occurred, DO NOT collect a culture.)
3. Place swab in Mycoplasma/Ureaplasma transport medium after collection. Tightly secure the cap of the transport tube to prevent leakage.

**Specimen Handling:**

1. Label a tube of Mycoplasma/Ureaplasma transport medium with a patient label.
- 2.. Complete a DHEC 1337 to accompany specimen [See general instructions for completing, page II-3](#). Be sure to complete specific test information  
Specimen: Mark "X" in the appropriate box. If "Other" is marked, enter specimen site. Date of Onset: Enter month, day and year.  
Symptoms: Circle each symptom that applies. If "Other" is circled, write in symptom(s).  
Test Requested: Mark "X" in the appropriate box.  
Virus Suspected: Enter name of virus suspected ie M. hominis, M. urea or both

## **Specimen collection for Mycoplasma/Ureaplasma, page 2 of 2**

### **Specimen Preservation and Transport:**

1. If M. hominis is suspected, store in refrigerator and ship with cold packs. If specimen will reach the laboratory within six hours. If shipping is delayed beyond 6 hours, freeze at -70°C. and ship on dry ice.
2. If Ureaplasma is suspected, specimen can be kept in the refrigerator for 24-48 hours after collection. Ship cold with cold packs. If shipping is delayed beyond 48 hours, freeze at -70°C and ship on dry ice.
3. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

### **Specimen Rejection:**

1. Incorrect collection media used
2. Specimen not cold on arrival
3. Cotton swab with wooden shaft used for collection.
4. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF ENTEROVIRUS (STOOL)

**Principle:**

To properly collect a stool specimen for the isolation of Enteroviruses including Polio, Coxsackie and Echo viruses. Specimens for virus isolation should be collected as early as possible during illness.

**Patient Preparation:**

No special preparation.

**Supplies:**

1. Wide-mouthed container.
2. Tongue depressor
3. DHEC form 1337, Viral Isolation request form (Pink)
4. Viral Transport media if collecting rectal swab. [See page II-1 to order.](#)

**Collection Precaution:**

**WEAR GLOVES WHEN HANDLING ALL STOOL SPECIMENS.**

**Collection Procedure (Stool)**

1. Collect stool in a clean (not necessarily sterile) wide-mouthed container that can be covered with a tight-fitting lid. These containers should be free of preservatives and detergents.
2. DO NOT COLLECT SPECIMEN FROM TOILET. CONTAMINATION WITH URINE SHOULD BE AVOIDED.
3. Infant specimens may be collected in a disposable diaper with plastic side facing inside.
4. Collect Solid walnut sized piece if stool is formed. Collect 5-10 ml if stool is liquid
5. Place in a dry collection cup. Secure top with tape.  
NOTE: If stool cannot be collected, a rectal swab may be collected. Swab should be placed in Viral transport medium

**Specimen Handling:**

1. Place a patient identification label on the container.
2. Complete a DHEC form 1337 to accompany specimen [See general instructions for completing, page II-3.](#) Be sure to complete test specific information:  
Specimen: Mark “X” in the appropriate box. If “Other” is marked, enter specimen site.  
Date of Onset: Enter month, day and year.  
Symptoms: Circle each symptom that applies. If “Other” is marked, write in symptom(s).  
Test Requested: Mark “X” in the appropriate box.  
Virus Suspected: Enter name of virus suspected.

## **Specimen collection for culture of Enterovirus- page 2 of 2**

### **Specimen Preservation and Transport:**

1. Store in refrigerator and ship cold with cold packs within 24-48 hours after collection if shipping is delayed, freeze at -70 ° C and ship on dry ice.
2. Transport medium is advantageous for virus isolation from swabs.

### **Specimen Rejection:**

1. Specimen not cold on arrival
2. Calcium alginate swab used for collection of rectal swab.
3. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CULTURE OF ENTEROVIRUS, OR RESPIRATORY VIRUS OR MUMPS (THROAT SWAB)

### **Principle:**

To properly collect a throat swab for the isolation of Enteroviruses, Respiratory viruses, or Mumps. (Urine is preferred for Mumps culture.)

### **Patient Preparation:**

No special preparation.

### **Supplies:**

1. Sterile cotton or Dacron swab **Do not use calcium alginate swab.**
2. Viral transport media or Influenza transport media (supplied in Influenza kit during flu season or during an outbreak. Store both transport media in refrigerator until needed.
3. DHEC form 1337, Viral isolation request form (Pink)

### **Collection Procedure for Throat Swab:**

*Collection of a throat washing has been discontinued because of the use of antibiotics in some collection media*

1. Shine a bright light if possible over the shoulder of the specimen collector into the oral cavity of the patient so that the swab can be guided to the posterior pharynx.
2. The patient is instructed to tilt his/her head back and breathe deeply.
3. Depress the tongue with a tongue depressor to help visualize the posterior pharynx.
4. Extend the swab to the back of the throat between the tonsillar pillars and behind the uvula.
5. Have the patient phonate a long Aah which will lift the uvula and help to prevent gagging.
6. The tonsillar areas and posterior pharynx should be firmly rubbed with the swab.
7. Care should be taken not to touch the teeth, cheeks, gums or tongue when inserting or removing the swab to minimize contamination with normal mouth flora.
8. Remove swab and immediately place into:

Viral transport media for Enterovirus, Mumps and Respiratory viruses  
other than Influenza.

Influenza transport media. for Influenza

### **Specimen Handling:**

1. Place a patient label on vial of viral transport media..
2. Complete a DHEC form 1337 to accompany specimen [See general instructions for completing, pg II-3](#). Be sure to complete test specific information:  
Specimen: Mark X in the appropriate box. If Other is marked, enter specimen site.  
Date of Onset: Enter month, day and year.  
Symptoms: Circle each symptom that applies. If Other is circled, write in symptom(s).  
Test Requested: Mark X in the appropriate box.  
Virus Suspected: Enter name of virus suspected.

## **Specimen collection for Enteroviruses, Respiratory viruses, and Mumps, page 2 of 2**

### **Specimen Preservation and Transport**

1. Store and ship viral transport tubes cold with cold packs within 24-48 hours after collection.
2. Store and ship Influenza transport tubes at room temperature
3. [See Section IV for appropriate shipping container, packaging and transport instructions.](#)

### **Specimen Rejection**

1. Use of calcium alginate swabs.
2. Specimen not cold on arrival(if in Viral transport media)
3. Universal rejections, see page I-7



## SPECIMEN COLLECTION FOR CULTURE OF *HERPES SIMPLEX*

### **Principle:**

The purpose of performing a herpes culture on a genital lesion or cervical/vaginal culture is to diagnose infection with the herpes simplex virus. A positive result is conclusive for diagnosis; however, a negative result does not exclude the diagnosis of herpes. Specimens taken from vesicular fluid are approximately 95% culture-positive; from pustular lesions, 70-85% culture-positive; from ulcers, 70% culture-positive; while only 25% of crusted lesions contain recoverable virus. The duration of viral shedding from ulcerative lesions is longer in first episodes than in recurrent episodes of genital lesions.

### **Patient Preparation:**

No special preparation.

### **Supplies:**

1. Sterile cotton-tipped swabs with plastic shafts  
**Do Not Use Calcium Alginate Swabs as Herpes Simplex Virus Is Inactivated upon Storage in the Presence of Calcium Alginate.**
2. Sterile saline (optional)
3. Tuberculin syringe with a 26-gauge needle
4. Viral transport media ( 2 SP Chlamydia transport media can also be used.).  
[See Page II-1 to order](#) Store media in refrigerator until needed.)
5. DHEC form 1337, Viral Isolation request form (Pink)

### **Collection precautions:**

**Wear disposable gloves and protective eyewear when collecting and handling specimens.**

### **Collection Procedure: (Genital Lesions, Vesicles and /or Ulcers)**

1. Clean the surface of the lesion with sterile saline if available or with tap water to remove any contaminating materials such as body fluids, excreta or drainage.
2. Specimens should be obtained from active lesions, which include ulcers and vesicular lesions. **The younger the lesions, the better likelihood of obtaining a positive culture.**
3. If the lesions are vesicular in nature, the fluid contained in the lesions can be withdrawn with a tuberculin syringe. The fluid can then be placed into Viral Transport media or 2 SP Chlamydia transport medium.
4. For vesicles that are intact, open with a sterile cotton-tipped swab.
5. Vigorously rub a sterile cotton-tipped swab over the base and margins of the lesion. Obtain vesicular fluid as well as material from the base and margins.  
Since Herpes viruses are obligate intracellular pathogens, the best way to obtain virus is to collect infected cells which would be present at the base and margins of the lesion.
6. Place the swab into transport medium,( or 2 SP Chlamydia transport media) and break off the end of the swab shaft and leave the swab inside the medium.
7. Recap the medium transport tube tightly to prevent leakage during shipment and refrigerate until it is sent to the Bureau of Laboratories.

## Specimen collection for culture of *Herpes simplex* - page 2 of 2

### Collection Procedure: (Cervical)

1. Obtain the cervical/vaginal specimen with the aid of a speculum that has been moistened with water.
2. Insert the speculum and if unable to visualize the cervical OS, remove excess mucus with a large cotton-tipped swab.
3. Moisten a sterile cotton-tipped swab with transport media and insert the swab into the endocervical canal approximately 2-3 cm and swab the cervical OS and the vaginal area. (NOTE: If the patient is pregnant, question her about vaginal bleeding or leakage of fluid from the vagina. If bleeding or leakage has occurred, DO NOT culture and refer patient to MD. If no bleeding or leakage has occurred, insert swab into the endocervix only until the cotton tip is no longer visible and rotate gently 10-30 seconds).
4. Remove the swab and place it into Viral transport or Chlamydia transport media.
5. Rotate the swab in the medium to elute the specimen.
6. Break the swab shaft off and recap the medium tightly to prevent leakage
7. Refrigerate transport media until transported to the Laboratory.

### Specimen Handling:

1. Label the transport tube containing swab with a patient label.
2. Complete a DHEC form 1337 to accompany specimen [See general instructions for completing, page II-3](#). Be sure to complete test specific information  
Specimen: Mark “X” in the appropriate box. If “Other” is marked, enter specimen site.  
Date of Onset: Enter month, day and year.  
Circle each symptom that applies. If “Other” is marked, write in symptom(s).  
Mark the appropriate box to specify if the patient is pregnant and/or if disease is active.  
Test Requested: Mark “X” in the Herpes culture box.  
Virus Suspected: Enter Herpes

### Specimen Preservation and Transport:

**Do not freeze at –20 °C. The Herpes virus is sensitive to freezing at this temperature.**

1. Place transport tube in a biohazard bag and pack with cold packs in a Styrofoam cooler. Transport within 24-48 hours after collection. If shipping is delayed or a prolonged transit time is anticipated, specimen should be frozen at -70°C and shipped on dry ice.  
The herpes virus is relatively unstable and is adversely affected by heat and drying.  
**The titer of virus falls progressively if the transport media reaches room temperature.**

### Specimen Rejection:

1. Calcium Alginate swab used for collection
2. Specimen not cold on arrival
3. Universal rejections, see page I-7

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# **SPECIMEN COLLECTION FOR *BORDETELLA PERTUSSIS* DETECTION BY PCR AND/OR CULTURE**

## **Principle:**

To properly collect nasopharyngeal swabs for the detection of *Bordetella pertussis* by PCR., and for culture of the organism.

## **A. DETECTION BY PCR**

### **Supplies:**

For collection kit for PCR, see page II-1

1. 2 nasopharyngeal swabs with DACRON tips for PCR
2. 2 tubes marked left NP swab for PCR and right NP swab for PCR
4. DHEC form 1345, Bacteriology request form (light orange)
5. Instruction sheet

### **Collection Procedure:**

*Use only DACRON tip swabs. DO NOT use cotton or calcium alginate swabs.*

1. Insert a thin swab with a flexible wire into the right nare. The swab is introduced flat and then pushed forward with gentle downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. The swab is rotated for a few seconds and gently withdrawn. Note: **Throat swabs are not acceptable.**
2. Place the swab into the tube marked **Right NP swab for PCR**
3. Repeat steps 1 and 2 for the left nare

### **Specimen Handling:**

1. Label the tubes with the patient's name..
2. Complete DHEC form 1345, Bacteriology, to accompany the tubes [See instructions for completing, page II-3](#) Be sure to mark the additional test specific information:  
Specimen Site: Mark X in 052 (NP) box  
Organism Suspected: write in *Bordetella pertussis* PCR  
Test Requested: Write in PCR

### **Specimen Preservation and Transport:**

1. Place the collection tubes containing swabs for PCR in a biohazard bag and pack with cold packs in a crush-proof container such as a Styrofoam cooler. Ship immediately.
2. If shipping is delayed, the PCR tubes can be stored in the refrigerator (4° C) for 24-48 hours

### **Specimen Rejection:**

1. Cotton or calcium alginate swab used for collection
2. Specimen too old
3. Universal rejections, see page I-7

for additional information on submitting specimens for PCR, please contact the Molecular Epidemiology Laboratory at (803) 896-0817

## Specimen collection for *B pertussis*, detection, and culture, page 2 of 2

### B *B PERTUSSIS* CULTURE

#### Supplies:

For collection kit for culture, please contact the Media/Reagent section (803) 896-0817

Collection kit contains

1. Nasopharyngeal swabs with dacron, or rayon tips. Do NOT USE COTTON TIPS
2. 1 tube of Regan-Lowe transport medium. **Warm to room temperature before using**
3. DHEC form 1345, Bacteriology request form (light orange)

#### Collection Procedure: (Nasopharyngeal)

1. Insert a thin swab with a flexible wire into the right nare. The swab is introduced flat and then pushed forward with gently downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. Rotate the swab for a few seconds and gently withdraw. Use a second wire swab in the same manner to sample the nasopharynx through the left nare.
2. ***Bordetella pertussis* will die rapidly on a swab. Swabs must be put into the transport media immediately after collection** Immerse both swabs into one tube of Regan-Lowe transport medium, bending the wire shaft of the swabs so that they will fit into the tube. Tighten the screw cap onto the tube.  
NOTE: Regan-Lowe must be at room temperature before the tubes are inoculated.

#### Specimen Handling :

1. Write the patient's name on the tube of Regan-Lowe or attach patient label.
2. Complete DHEC form 1345 to accompany specimen .[See general instructions for completing, page II-3](#). Be sure to mark the following boxes:  
Specimen Site: Mark "X" in 052 Nasopharyngeal (NP) box  
Date Collected:  
Organism Suspected: write *B. pertussis*  
Test Required: Mark "X" in 510 box for culture  
**Please indicate any antibiotic therapy the patient has received**

#### Specimen Preservation and Transport:

1. Store and ship at room temperature for overnight delivery to the laboratory
2. If shipping is delayed the transport tube may be incubated at 35°C for 24-48 hours.
3. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

#### Specimen Rejection:

1. Regan-Lowe medium not used or media expired
2. Cotton swab used
3. Specimen too old.
4. Universal rejections, see page I-7

For additional information on submitting specimens for culture, please contact the Bacteriology Laboratory (803) 896-0805

# **SPECIMEN COLLECTION FOR CYTOLOGIC EVALUATION BREAST SMEAR**

**Available only to DHEC County Health Department Clinics**

## **Principle:**

These smears are used for the detection of pre-malignant and malignant changes of the breast. This is an effective method for dealing with breast secretions(nipple discharge).

## **Supplies:**

**All except the pencil and rubber bands can be obtained from the Bureau of Laboratories**  
[See page II-1 to order](#)

1. Frosted end slide
2. Cyto-spray fixative
3. DHEC form 1362, GYN Cytology request form
4. Cardboard Slide mailer
5. Pencil and rubber bands

## **Collection Procedure**

Drops of fluid from the nipple are smeared directly on clean glass slides and fixed immediately with spray fixative.

1. Label the frosted end of a slide with patient's name, ID number, collection date and indicate whether right or left breast.
2. Obtain drops of fluid from the nipple and smear them directly on the clean, labeled slide Repeat for second breast if applicable.
3. Fix immediately with spray fixative
4. After slide(s) are fixed they should be air-dried for about ten minutes before being packaged for transport

## **Specimen Handling:**

Place slide(s) in cardboard slide mailer, close and secure mailer with several rubber bands.

## **Specimen Packaging and Transport:**

1. Store and ship at room temperature
2. Fixed slides are considered non-hazardous, and do not require special packaging. Package to protect against breakage.

## **Specimen Rejection:**

1. Slides not fixed, or improperly fixed
2. Universal rejections, see page I-7

## SPECIMEN COLLECTION FOR CERVICAL/ENDOCERVICAL PAP SMEAR

### **Principle:**

To properly obtain a sample of cells from the cervix (Papanicolaou smear) to detect cervical cancer, its precursors, and other abnormalities of the reproductive tract.

### **Supplies**

**All except the speculum can be obtained from the Bureau of Labs. See pg II-1 to order.**

1. Sterilized or single-use disposable bivalve speculum:
2. Plastic collection spatula, brush and/or “broom”
3. Three 1 inch glass slides, app. 1mm thick and with one frosted end
4. Cardboard slide mailer
5. DHEC form 1362, GYN Cytology request form

### **Patient Preparation:**

Preferably, the woman should be tested 2 weeks after the first day of her last menstrual period and **definitely not when she is menstruating**. Women should not use vaginal medication, vaginal contraceptives, or douches during the 48 hours before the appointment. Intercourse is not recommended the night before the examination.

### **Collection Precautions:**

Cytological specimens should be considered infectious until fixed with a germicidal fixative.  
**OBSERVE UNIVERSAL PRECAUTIONS WHEN COLLECTING AND HANDLING SPECIMENS**

### **Collection Procedure:**

#### **1. Position of the Patient:**

Although it is possible to perform cervical cytology sampling with the patient in a variety of positions, in the United States it is usually performed with the patient in the dorsolithotomy position.

#### **2. Preparation of the Cervix:**

Once the patient is positioned, a sterilized or single-use disposable bivalve speculum of appropriate size should be gently inserted into the vagina, avoiding direct pressure on the sensitive anterior structures (e.g., urethra). Water may be used to lubricate and warm the speculum; however, lubricant jellies should not be used. Several sizes of specula should be available so that an appropriate device may be chosen for the patient. Very young patients, patients with little sexual experience, and elderly patients with vaginal atrophy require the use of a smaller, narrower speculum than women who are sexually active. The speculum must be positioned so that the entire face of the cervix appears at the end of the instrument because a sample from this area is necessary for adequate specimen collection. A large, cotton-tipped swab is often useful for helping to position the cervix.

It is important to obtain a smear that is not obscured by blood, mucus, or inflammatory exudate. Following correct positioning of the speculum in the vagina,

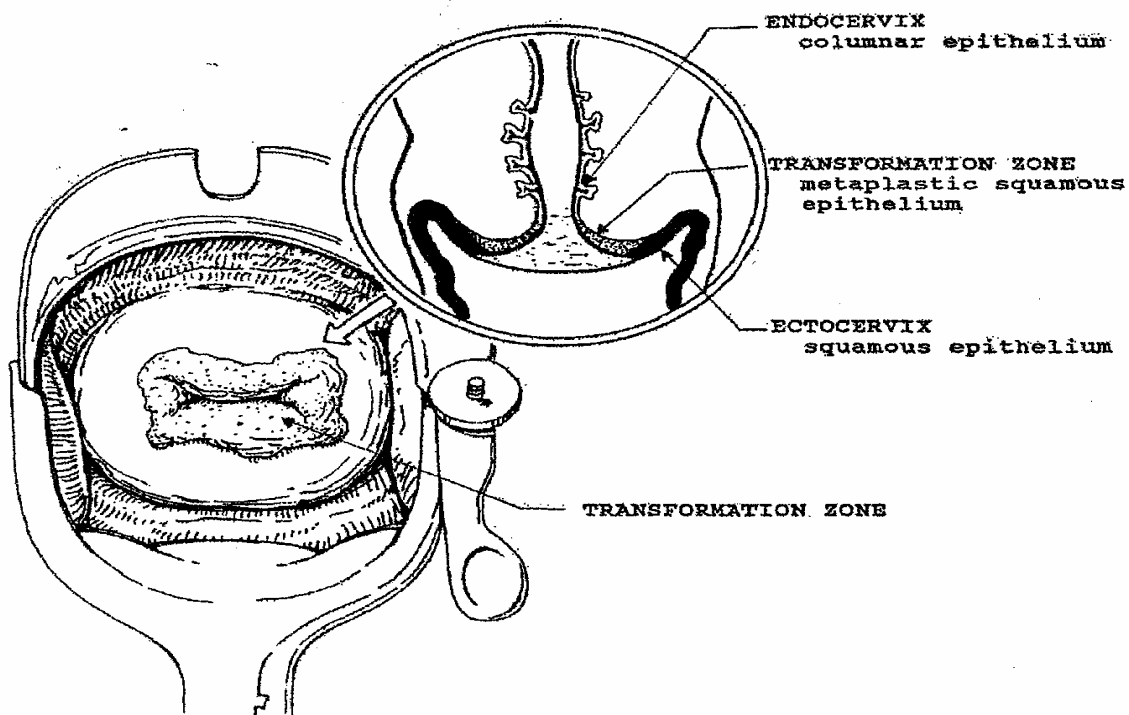
## Cervical/Endocervical PAP smear collection, Page 2 of 6

If there is excess mucus or other discharge present, it should be gently removed with ring forceps holding a folded gauze pad or large, cotton-tipped swab. Inflammatory exudate may be removed by placing a dry 2 X 2-inch piece of gauze over the cervix and peeling it away after it absorbs the exudate, or by

Using a dry proctoswab or scopette. The cervix should not be cleaned by washing with saline as it may result in a relatively acellular smear. The sample should be obtained before the application of acetic acid.

### 3. Collection site:

Visual inspection of the lower genital tract and cervix through the speculum is a prerequisite to optimal sample collection. Squamous epithelium of the ectocervix has a smooth, pearly, opaque appearance. Native columnar epithelium of the endocervix is slightly reddish with a “cobblestone” surface. The transformation zone (where native endocervical columnar epithelium has undergone conversion to “immature” metaplastic squamous epithelium) has an intermediate, variegated appearance. (See figure 1.)



**Figure 1. View of the cervix through the speculum**

T

The location and configuration of the active transformation zone is variable, depending on several factors such as vaginal pH, pregnancy, hormonal milieu, menopause, prior therapy, and individual anatomy. The upper (endocervical) limit of the transformation zone is dynamic, defined by the leading edge of the migrating

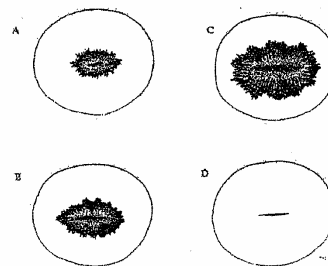


## Specimen collection for Cervical/Endocervical PAP smear , page 3 of 6

squamo-columnar junction. In post-menopausal women, the squamo-columnar junction is often high in the endocervical canal and no longer visible. (See Figure 2.)

An optimal cervical specimen includes sampling of the squamous and columnar epithelium, encompassing in particular the transformation zone where the majority of cervical neoplasias arise. The specific sampling instrument(s) and sampling technique used should be based on a consideration of individual patient anatomy, particularly the location and configuration of the transformation zone as determined by visual inspection. The method detailed below outlines a collection technique using a combination of wooden or plastic patula and cervical brush instruments.

- A. Narrow transformation zone
- B. Broader transformation zone
- C. Broadly everted transformation zone-  
parous type.
- D. Squamo-columnar junction high in  
Endocervical canal- postmenopausal  
or post-treatment type



**Figure 2: Variations in mucosa of the cervix.**

Modified from Thompson DW. *Adequate "PAP Smears, A Guide for Sampling Techniques in Screening for Abnormalities of the Uterine Cervix*. Ontario, Canada: Laboratory Proficiency Testing Program, 1989. Modified with the permission of the Laboratory Proficiency Testing Program, 250 Bloor Street East, Suite 501, Toronto, Ontario M4W1E6.

- 4. **Collection Procedure Using Wooden or plastic spatula and Cervical Brush\***
  - (a) **Slides should be labeled before the smear is obtained.**  
Label frosted end of the glass slide with the patient's first and last name using a diamond or hard (#3) lead pencil. (inks tend to run in processing.) If the specimen consists of more than one slide, it is mandatory that the source of the specimen be indicated.
  - (b) **Observe universal precautions for collecting and handling specimens**  
Insert the speculum, which may be *slightly* moistened with water or saline if necessary. No other lubricants should be used.
  - (c) Visually identify the cervix, and the transformation zone, if visible, and direct sampling efforts to encompass this area. **Note:** If an elevated, ulcerated, necrotic, or exudate-covered lesion is observed, arrangements should be made for biopsy following cytology sampling.

## Specimen collection for Cervical/ Endocervical PAP smear Collection, Page 4 of 6

- (d) Choose the contoured end of the spatula that best conforms to the anatomy of the cervix in the transformation zone. Rotate the spatula at least  $360^\circ$  about the circumference of the cervical os and ectocervix, while maintaining firm contact with the epithelial surface.

**Note:** A clockwise rotation beginning and ending at 9 o'clock ( or counter-clockwise rotation from 3 o'clock to 3 o'clock) will position the spatula so that the collected material is retained on the upper horizontal surface as the instrument is removed.

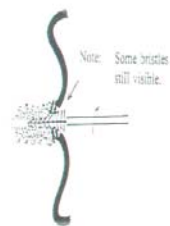


Spatula

Do not smear the sample at this time unless the specimen is to be immediately fixed (see 3-B) Hold the spatula between the fingers of the nonsampling hand ( or rest it on the glass slide) with the specimen face-up, while the cervical brush material is collected without delay.

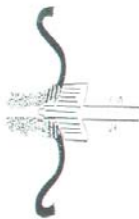
- (e) Insert the cervical brush into the os: Some bristles should still be visible. This will minimize inadvertent sampling of the lower uterine segment. With *Gentle* pressure, rotate the brush only  $90$  to  $180^\circ$  to minimize Bleeding..

**Note:** Brushes have circumferential, radiating bristles that come in contact with the entire surface of the os upon insertion. This is in contrast to the edge of a spatula which is in contact with only a fraction of the epithelial surface at any one time. Therefore, the brush need only be rotated one quarter turn ( $90^\circ$ ) while the spatula must be rotated at least one full turn ( $360^\circ$ ).



Brush

\*The use of both instruments is recommended for optimal sampling. The preferred order of spatula and brush sampling has not been subjected to large scale studies. Obtaining the spatula specimen first diminishes the possibility of blood contamination due to trauma by the brush. However, some speculate that performing the brush collection first may increase the yield of exfoliated abnormal cells by the spatula. One option is to sample the ectocervix twice, both before and after obtaining the endocervical brush specimen.



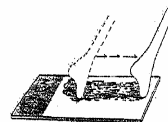
Broom

Above figure: The solid black area represents mature squamous epithelium, the hatched area represents the transformation zone, and the stippled area the original endocervical zone

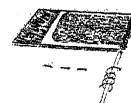
### Prepare Smears:

The object is to quickly but evenly spread the cellular material in a thin layer on the glass slide. Thin out large clumps of material as much as possible, while avoiding excessive manipulation, which can damage cells. To avoid the development of air-drying artifact, transfer the material from both sampling instruments to the material from both sampling instruments to the slide within a few seconds and fix immediately.

1. To transfer material from the spatula, smear the sample with a single stroking motion using moderate pressure to thin out clumps of cellular and mucus material. Avoid excessive force or manipulation, which will damage cells.



2. To transfer material from the brush, roll the bristles across the slide by twirling the brush handle.



3. To transfer material from the broom, smear the sample with a painting action, using both sides of the broom.



Figure 4.. Transferring the sample to the slide

4. Smearing option A  
Smear the spatula sample across the slide:  
Roll the brush directly over top and **Fix immediately.**  
(with this method, the ability to localize the origin of the cells may be lost.)
5. Smearing option B  
Spread the spatula sample over the left side of the slide, cover the right-hand side with cardboard, and immediately spray fix  
Roll the brush material onto the right-hand side of the slide and immediately spray fix  
**Note:** With this method, the spatula specimen may be spread and fixed before obtaining the endocervical brush sample.

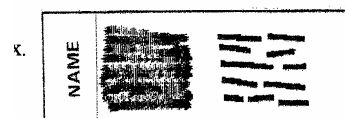
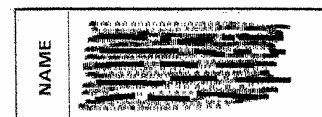


Figure 5..Options for transferring the sample(s) to glass slide(s)

### Fix smears

After the specimen has been spread evenly on the slide, the slide should be fixed immediately. Fixatives are agents that are used on gynecologic smears to prevent cell distortion and to maintain true morphologic structure. Distortion due to improper fixation nearly always prevents proper and accurate evaluation of the cell population.

Air drying is the absence of fixation. Air drying produces artifacts and cellular distortion and may lead to misinterpretation of smears. Air drying of a Pap smear is **Not** recommended.

## **Specimen collection for Cervical/ Endocervical PAP smear, page 6 of 6**

1. **Cytofixative spray is the recommended fixative and is provided upon request**  
Hold the nozzle of the cytofixative spray can approximately 12 inches from the slide, and apply an even coat to cover the smeared area. Holding the spray fixative container too close to the slide can result in the development of cellular artifacts, while holding the container too far from the slide may result in drying artifacts or uneven fixation. Holding the spray fixative too close to the slide can also result in flooding the slide and washing or blowing away the cells.

The use of commercially available hairspray is a common practice in some parts of the country. Use of this material is absolutely discouraged because of the variability in the ingredients. (These cosmetic aerosols may result in a very poor specimen preservation.)

2. **Alternative Wet Fixation with 95% ethanol**  
A widely accepted, ideal cellular fixative for gynecologic/cytologic smears is 95% ethanol. Place 95% ethanol in an appropriate container and immerse the freshly prepared smear immediately into the fixative. Fixation occurs in 5 to 30 minutes. If the fixative is to be reused, it should be filtered.

### **Specimen Handling**

1. **Allow slides to dry completely before packaging for transport.**
2. Complete a DHEC form 1362 to accompany the specimen [See general instructions for completing, Pg II-3](#). Be sure to complete specific test Information.

Date of collection

Date of LMP

Specimen source

Provider code

### **Specimen Transportation:**

1. Place properly labeled slides in cardboard slide mailer transport to prevent breakage.
2. Fixed slides are considered non-hazardous and do not require special precautions while transporting.

### **Specimen Rejection:**

1. Smears improperly prepared or fixed
2. Universal rejections, see page I-7

SPECIMEN COLLECTION FOR DETECTION OF  
**CHLAMYDIA/GC**  
**GEN-PROBE PROCEDURE**

**Principle:**

To properly collect a specimen for the detection of Gonorrhea or Chlamydia trachomatis

**Patient Preparation:**

No special preparation.

**Supplies:**

GC/ Chlamydia Gen-Probe supplies [See page II-1 to order.](#)

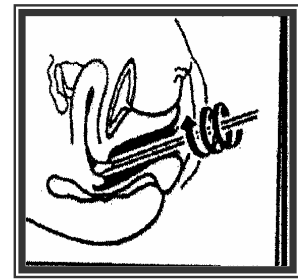
Two collection kits are available: One for female patients, the other for male patients.

Specify Male or Female kit when ordering

DHEC form 3445, GC/Chlamydia screening (Gen-Probe) request form

**Collection Procedure ( Cervical Specimens):**

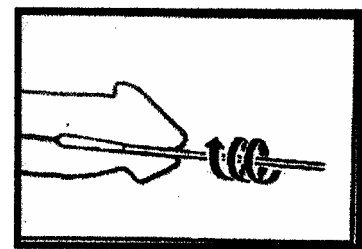
1. Remove excess mucus from cervical os and surrounding mucosa using one of the swabs provided. **Discard the cleaning swab.**
2. Insert second swab from collection kit 1-1½ cm into endocervical canal.
3. Rotate swab for 30 seconds in endocervical canal to ensure adequate sampling.
4. Withdraw swab carefully; avoid any contact with vaginal mucosa.
5. Insert one swab (collection swab only) into the Gen-Probe transport tube.  
Snap off shaft at score line or cut shaft to fit tube.
6. Cap tightly. **Do not discard liquid.**



**Collection Procedure (Male Urethral Specimens)**

*Patient should not have urinated for at least 1 hour prior to sample collection.*

1. Insert swab from collection kit 2-4 cm into urethra.
2. Once inserted, rotate swab gently at least one full rotation using sufficient pressure to ensure swab comes in contact with all urethral surfaces.
3. Allow swab to remain inserted for 2 to 3 seconds.
4. Withdraw swab.
5. Insert collection swab into the Gen-Probe transport tube.  
Snap off shaft at score line or cut shaft to fit tube.
6. Cap tightly. **Do not discard liquid**



**Note: The current Gen-Probe assay used for detecting Chlamydia Trachomatis is not approved for conjunctival samples**

**Specimen Handling:**

Complete DHEC form 3445 to accompany specimen [See general instructions for completing, page II-3](#). Be sure to complete test specific information.

**Specimen Preservation and Transport**

1. Store and ship at room temperature within 7 days of collection. If shipping is delayed, vortex specimen, remove swab and store tube at -20°C -or- 70°C. and ship on dry ice
2. [See section IV for appropriate shipping container, packaging and transport instructions](#)

**Specimen Rejection:**

1. No swab in tube
2. Specimen from non-genital site
3. Specimen > 7 days old when received
4. Universal rejections, see page I-7

**Note: Specimens collected with this system cannot be used for culture. Only swabs supplied with the Gen-Probe specimen collection system should be used for specimen collection.**

## **SPECIMEN COLLECTION FOR OVA AND PARASITES**

### **Principle:**

To properly collect a stool specimen for the detection of intestinal parasites such as Giardia, Cryptosporidia, Microsporidia, Cyclospora, or helminth eggs and larvae ie Ascaris, hookworms, tapeworms.

### **Patient Preparation:**

No special Preparation

### **Supplies:**

1. Parasitology kit (O & P) [See page II-1 to order.](#)  
**Note: This kit will not allow detection of trophozoites.**
2. PVA preservative for liquid stools and detection of trophozoites (Not provided)
3. DHEC form 1334, Parasitology request form (aqua)
4. 10% formalin (recommended for parasites such as Cyclospora)( not provided)

### **Collection Procedure:**

Refer to diagram that follows.

1. Have patient produce a bowel movement in a clean wide-mouthed container or on a clean paper. **DO NOT COLLECT SPECIMEN FROM TOILET.**
2. Infant specimens may be collected in a disposable diaper by turning the diaper inside out with the plastic side facing the skin. Specimens collected on the absorbent side are not acceptable.
3. Fill plastic tube ½ full with feces. Screw cap on tightly.  
If using PVA or 10% formalin, place feces in preservative immediately after collection.  
Most commercially prepared preservatives have a “fill line” on the container to indicate the quantity required. Follow manufacturer’s instructions.

### **Specimen Handling:**

1. Place a patient identification label on the outside of the plastic tube.
2. Place plastic tube into the metal can. Screw cap tightly.
3. Complete a DHEC form 1334 to accompany specimen [See general instructions for completing, page II-3.](#) Be sure to complete test specific information:  
Reason for test: Mark X in the appropriate box  
Organism Suspected: Indicate organism suspected.  
Test requested: Mark X in the appropriate box.

### **Specimen Preservation and Transport:**

1. Wrap request form around the metal can containing the specimen. Place both into the cardboard container. Screw cap tightly.
2. Store and ship at room temperature to arrive within 4 days after collection.
3. [See section IV for appropriate shipping container, packaging and transport instructions](#)

## **Specimen Collection for Ova and Parasites- page 2 of 3**

### **Specimen Rejection:**

1. Specimen contaminated with urine or water, laxatives or barium
2. Specimen covered in fungal growth
3. Specimen more than 4 days old
4. Universal rejections, see page I-7



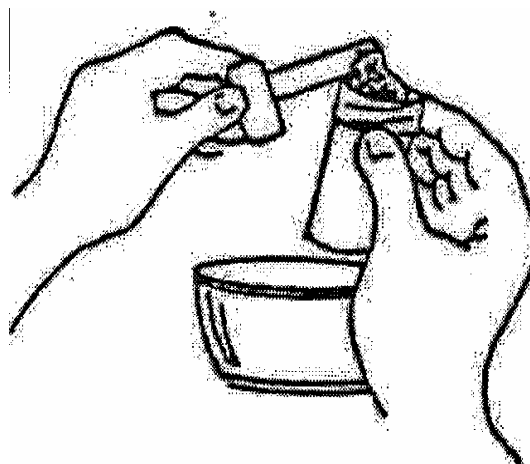
## STOOL COLLECTION FOR OVA AND PARASITES

This kit is for detection of cyst forms. Detection of trophozoites requires submitting the specimen in a preservative such as PVA (polyvinyl alcohol). Liquid stools are more likely to contain trophozoites and should be submitted in a preservative.

1. Have patient produce a bowel movement (number two) in a clean container or on a newspaper.



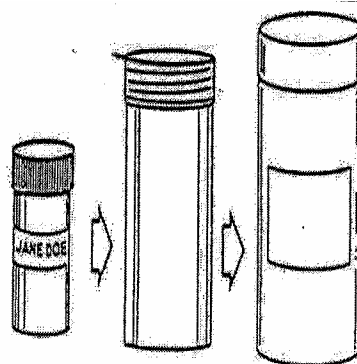
2. Fill the plastic tube  $\frac{1}{2}$  full with bowel movement. Screwcap on Tightly.



1. Print patient's name on the label of the plastic tube. Please keep outside of the tube clean.



4. Put plastic tube into the metal can. Screw cap tightly. Wrap the request form around the metal can. Place both into the mailing container



5. Return the kit to the Health Department as soon as possible or bring to the Bureau of Laboratories at 8231 Parkland road, Columbia, SC. Specimens more than 2 days old may not yield accurate results.

## SPECIMEN COLLECTION FOR PINWORM PREP

### Principle:

Diagnosis of Pinworm infection can be confirmed by the demonstration of Enterobius vermicularis ova in the perianal area.

### Patient Preparation:

No special preparation.

### Supplies:

1. Pinworm Prep. Slide
2. Cellulose (scotch) tape strip. Use clear tape. **Do Not use frosted tape.**
3. Clean microscope slide
4. Tongue depressor
5. Slide label
6. Slide mailing container
7. DHEC form 1334, Parasitology request form (aqua)

### Slide Preparation:

Place strip of cellulose tape to cover slide, folding back approximately ½ inch piece on one end to form a tab.

### Collection Procedure:

Best time for collection is a few hours after retiring, first thing in the morning before bowel movement or both. Therefore, collection is usually done at home.

1. Instruct patient or parent in collection procedure. (See illustration that follows.)  
Give prepared slide, collection diagram and mailing container to patient or parent
2. Instruct patient/parent on packaging and shipping of specimen to the laboratory.

### Specimen Handling:

1. Label slide with patient's name
2. Complete DHEC form 1334, to accompany specimen

[See general instructions for completing, page 1I-3](#)

Be sure to complete specific test information:

Reason for test: Mark X in the appropriate box

Test required: Mark X in the appropriate box

### Specimen Preservation and Transport:

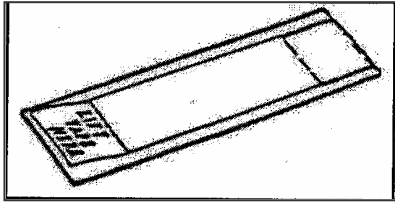
1. Place slide(s) in cardboard slide mailer
2. Secure mailer with rubber band and place in biohazard bag
3. Store and ship at room temperature.
4. [See section IV for appropriate shipping container, packaging and transport.](#)

### Specimen Rejection:

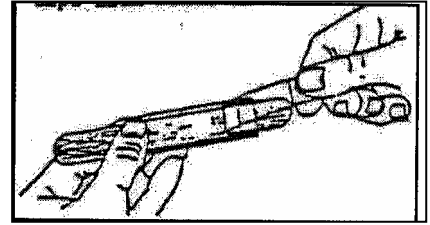
1. Frosted tape used
2. Universal rejections, see page I-7

## PINWORM PREP

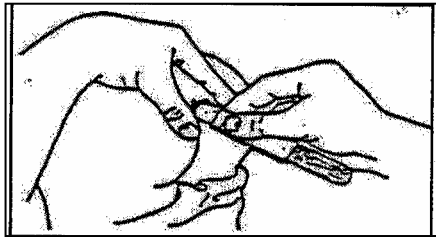
Use of cellulose tape slide for pinworm collection



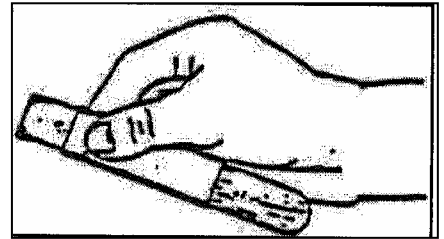
1. Cellulose-tape slide preparation



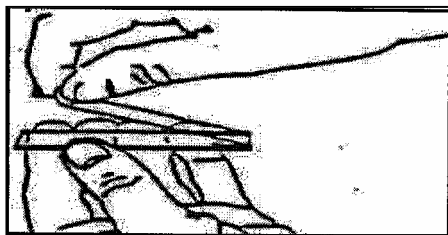
2. Hold slide against tongue depressor one inch from end of depressor.  
Lift tape from slide



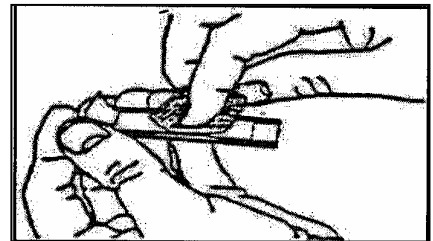
3. Loop tape over end of tongue depressor sticky side out and press tape to anal region to cover as much of the perianal area as possible



4. Hold tape and slide against tongue depressor



5. Loosen end of tape from end of depressor and press tape onto slide, sticky side down. Apply the tape so as to prevent trapping air bubbles between tape and slide



6. Use cotton or gauze to smooth tape down

Note: Best time for collection is a few hours after retiring (10 or 11 pm) or first thing in the morning before bowel movement.

## **SPECIMEN COLLECTION OF SKIN SCRAPINGS FOR SCABIES**

### **Principle:**

Diagnosis of scabies can be confirmed by demonstration of the mites, eggs or scybala (fecal pellets). Because the mites are located under the surface of the skin, scrapings must be taken from the infected area.

### **Supplies:**

1. Mineral oil
2. Sterile scalpel blade
3. Clean glass slide and coverslip
4. Applicator stick
5. DHEC form 1334, Parasitology request form
6. Cardboard slide mailer (holds 2 slides)
7. Biohazard bag

### **Safety Precautions:**

Specimens must be handled with care. *Sarcoptes scabiei* is **highly contagious**. **Wear gloves and lab coat while collecting specimens.**

### **Collection Procedure:**

1. Place a drop of mineral oil on a sterile scalpel blade. (Mineral oil is preferred over potassium hydroxide solution or water. Mites will adhere to the oil and oil will not dissolve fecal pellets).
2. Allow some of the oil to flow onto the papule.
3. Scrape vigorously six or seven times to remove the top of the papule. (There will be tiny flecks of blood in the oil).
4. Transfer the oil and scraped material to a glass slide. (An applicator stick can be used).
5. Add **one or two drops** ( no more than 2) of mineral oil to the slide and stir the mixture.
6. Place a cover slip on the slide.

### **Specimen Handling:**

1. Place a patient identification label on the edge of the glass slide
2. Complete DHEC form 1334 to accompany specimen. [See general instructions for completing, page II-3.](#)

### **Specimen Preservation and Transport:**

1. Place slide(s) in cardboard slide mailer. or plastic slide box (not supplied)
2. Secure mailer with rubber band and place mailer in Biohazard bag.
3. Store and ship at room temperature
4. [See section IV for appropriate shipping container, packaging and transport instructions.](#)

### **Specimen Rejection:**

1. Too much oil used (more than 2)
2. Universal rejections, see page I-7

# URINE DRUG SCREEN SPECIMEN COLLECTION AND CHAIN-OF-CUSTODY PROTOCOL

## Principle:

To properly collect a urine specimen for forensic urine drug testing

When laboratory test results are to be used for legal purposes, a chain-of-custody (COC) protocol must be maintained for the urine specimens. Chain-of-custody is a protocol used to certify that a sample has not been compromised and meets the legal requirements for protection of evidence.

## Supplies:

1. Collection Containers w/lids
2. Security Tapes
3. Permanent Ink Marking Pens
4. Temperature Strips
5. Tamper-proof Bio-Hazard Bags
6. Integrity Seals
7. Mailing label for outside of box
8. DHEC form 1310, Forensic Urine Drug Testing (chain of custody)

## Collection Preparation:

1. Complete DHEC form 1310, Forensic Drug Testing ( blue) to accompany each specimen. All patient and sender information on the top half of the form except the temperature box as well as the Patient History box must be completed by the collector **prior to specimen collection** [See general instructions for completing, page II-3.](#) [Be sure to complete Test specific information and Patient history.](#)
  - Date and time specimen collected
  - Type of Specimen. Mark X in appropriate box **Forensic** samples automatically receive Gas Chromatography Mass Spectrometry (GC/MS) confirmation if sample screens positive. These results are appropriate for legal uses. **Medical** samples, are not automatically confirmed. The client must request this confirmation testing
  - Reason for Test: Mark X in appropriate box
  - Test Requested: Mark X in appropriate box
  - Patient History: List any medications (prescription and over the counter) the donor is currently taking or has taken in the past 2 weeks. **Inform the donor that this information is voluntary.**
2. Write Donor's name (must exactly match name on form) and date collected on the side of the collection cup. **It is not necessary to write anything on the lid.**

## Collection Procedure:

1. Prepare toilet area
  - Remove all chemicals or cleaning supplies from the collection area
  - Tape flush handle of toilet and any water faucets in area closed.
  - Put dye or food coloring in toilet bowl (Red preferred)
2. Instruct donor that he or she will not be allowed to carry any personal items into the collection area.

## Urine Collection for Drug Screen, Page 2 of 3

3. Attach a temperature strip on the side of the collection container near the base. Give container, but NOT the lid, to the donor and instruct donor to provide at least 30 ml. of urine. Any specimen of less than 30 ml. will be rejected for Chain-of-Custody. If donor cannot provide the minimum quantity, the specimen will be discarded and the donor will be required to provide another specimen later using a clean container. Donor may be allowed to drink fluids to stimulate urine production.
4. The donor must return the container with specimen to the collector within 4 minutes of collection.

### Specimen Handling

#### **THE COLLECTOR AND THE DONOR MUST KEEP THE SPECIMEN IN VIEW AT ALL TIMES**

1. The collector will close the container **in the presence of the donor**. By tightly screwing the lid in a clockwise direction. Be sure lid is not canted to prevent leakage. during transport.
2. Collector will note the Temperature (green area on specimen collection temperature strip) and complete the Temperature box of the request form. **It is critical to check the temperature of the specimen within 4 minutes from collection.**
  - a. Mark X to indicate if temperature was read within 4 minutes
  - b. Mark X in Yes box if temperature is within acceptable range. The range of acceptable temperature is 90.5 to 99.8 °F. If the temperature of the urine does not fall within this range, it is not acceptable and another specimen must be collected. immediately.
  - c. Record the actual temperature. This is not required but is used for informational purposes only.
3. Collector will seal the container in the presence of the donor. with security tape, and both collector and donor must initial the tape. Be sure that tape also has collection date. Care should be taken not to cover the writing on the side of the container. One unbroken strip over the top and down the sides of the container is sufficient to maintain COC requirements.
4. Donor must review the testing form for accuracy of information. If there is an error it will be corrected as follows:
  - a. Information entered by collector will be corrected by collector. Information entered by donor will be corrected by donor
  - b. Mark through the incorrect information with **ONE single line**. Date and initial the marked thru line.
  - c. Insert the correct information above or to the side of the marked thru line.
5. The collector should then read the certification statement to the donor and have him/her place his/her signature and the current date on the line marked "Donor Signature and Date". The collector should sign his/her name on the line marked "Collector's name and Date. **If the form is missing either signature or date the specimen must be rejected.**
6. After completing this section, give the donor the back copy (part 4, donor copy) and remind donor to retain it in a secure place for their files.
7. Place the specimen into the smaller pouch of the Tamper-proof biohazard bag.
8. At this point, collection is complete and **Donor is free to leave.**

## Urine Collection for Drug Screen, Page 3 of 3

**Failure to comply with the above protocol will result in loss of Chain-of Custody verification. The specimen will be tested as a NON chain-of custody specimen.**

### **Specimen Preservation and Transport:**

1. The collector should place a paper towel and the specimen into the bio-hazard bag. The towel will absorb any accidental leakage of the specimen.
2. Tear off the original and first copy of the DHEC 1310 form, fold and place inside the outside pocket of the bio-hazard bag. **Do no place the form inside the bag with specimen.** The remaining copy is for the employer (collector) to keep.
3. Use the smallest box which will accommodate the number of specimens you are transporting for testing. Place the specimen(s) into the shipping container, and place newspaper or paper towels around the bio-bag(s) to minimize movement of specimens during transport.
4. Seal the shipping container with tape, stretching it across the top of the two flaps and extending down sides of box.
5. Place Toxicology label and Integrity Seals (yellow labels) on the outside of the shipping box so they bridge the two flaps of the shipping container.
6. Urine specimens for drug testing do not require hazard marking. **DO NOT use a biohazard sticker on the outside of the shipping container.**
7. Transport at room temperature

### **Specimen Rejection:**

1. Specimen volume is not at least 30 ml.
2. Form is not filled out and signed as required
3. No date or initials on security tape.
4. Evidence of tampering with the mailing box or specimen.

For further information regarding Chain-of-Custody specimens, call (803) 896-0891.

